Efficacy of a Trauma Information Booklet in reducing Post-traumatic Symptoms after Road Traffic Accidents

Thesis

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Research Dissertation

'Efficacy of a Trauma Information Booklet in reducing Post-traumatic Symptoms after Road Traffic Accidents'

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ABSTRACT

ttraumatic Stress Disorder (PTSD) is a common sequel of traumatic events and among the st serious of all psychiatric disorders (Davidson, 2000). One of the most frequent forms of ma, road traffic accidents (RTAs) often results in PTSD (Mayou et al., 2000). Currently, it can e a long time until PTSD sufferers receive effective psychological help. Early treatments of SD, which could be used in routine clinical practice for large numbers of people, may offer a t-effective and helpful alternative. The present research set out to test the efficacy of a trauma rmation booklet, as part of a randomized controlled trial with subjects suffering from PTSD owing a RTA. The trauma booklet was given to 25 PTSD sufferers and compared with ther group of 25 PTSD sufferers, who were assigned to a waiting list condition. Measures of SD symptoms, depression and anxiety were taken at baseline, at the time of random ignment, 3 weeks, 3 months and 9 months later. The results indicated that although clients in booklet condition improved over the follow-up period, the booklet was not significantly erior to the waiting list control. Qualitative findings indicated that the trauma booklet in its rent format may serve some usefulness in enabling people to understand their symptoms of SD and in providing advice on how to access therapeutic help, which, if sought out early, may ve to prevent the occurrence of chronic PTSD and its debilitating effects on people's functioning life. The clinical implications of these finding are discussed and recommendations for future earch are made.

CONTENTS

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2.0 INTRODUCTION

2.1 POSTTRAUMATIC STRESS DISORDER (PTSD)

2.1.1 HISTORICAL OVERVIEW

Traumatic incidents have existed as long as mankind has. Although descriptions of the effects of traumatic events on human beings have occupied the literature for a long time, e.g. Greek Mythologies, several of Shakespeare's plays etc., the systematic psychological study of trauma has only received attention in fairly recent years and even then, as Herman (1992) observed, it has been marked by episodic amnesia, where periods of active investigation have alternated with periods of oblivion. The earliest, systematic clinical observations and documentations of the psychological effects of trauma were conducted in 1880 by Jean-Martin Charcot at the Salpêtrière, a Parisian Hospital complex and asylum for the most vulnerable members of the Parisian lower social classes. He observed that the symptoms of what he referred to as 'the Great Neurosis' or also 'Hysteria' were psychological because they could be artificially induced and relieved through the use of hypnosis. Charcot's work was taken up and further expanded on by his students, Janet, Freud and, later, Freud's collaborator, Joseph Breuer (Freud & Breuer, 1895). By 1896, Freud believed that he had understood the origins of hysteria and he put forward in his report entitled *'The Aetiology of Hysteria'* that occurrences of premature sexual experiences during childhood development could be so profoundly distressing to an individual that they could lead to repression as an ego defense to remove the unpleasant memories and emotions

of the traumatic event from awareness, which then could lead to various neurotic symptoms and behaviours. However, already in 1887, Freud abandoned this post-traumatic 'seduction theory' as it is referred to in psychoanalytic circles, in favour of a focus on fantasy, imagery and thoughts, which he subsequently considered more central to analysis rather than actual memories of early childhood abuse (Freud, 1925). This change in Freud's emphasis brought about another period of oblivion, during which the dominant view was that, other than solely a traumatic event, an organic cause or a physical concussion to brain tissue must be at the centre of client's symptoms, which by then took on labels, such as 'shell-shock' or 'railway spine syndrome'. Nevertheless, as can be inferred from Freud's *'Introductory Lectures on Psychoanalysis'* in 1917, despite his distancing from his earlier theory, he recognized that traumatic neurosis, such as war neurosis or neurosis following railway collisions, had a psychological origin that was directly related to the traumatic event and was not linked to an organic cause (Freud, 1955).

In 1952, the American Psychiatric Association defined criteria for 'Gross Stress Reaction', in their first edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM), but at that time, there was still insufficient scientific knowledge and clinical interest in the effects of trauma. In line with earlier Freudian thinking, this classification presumed that the persistence of traumatic reactions could only be due to a person's underlying psychopathology, which through the trauma had become more apparent, because the ego now lacked the capacity to defend itself against pre-morbid and repressed infantile conflicts.

Wilson (1995) summarized some of the major events of the 20th century: two world wars, the atomic bombing of Hiroshima and Nagasaki, scores of nationalistic and colonial wars, widespread civil violence, mass genocide, catastrophic disasters of human and natural origin, the growing awareness of domestic violence and childhood sexual abuse, technological disasters, famine, widespread diseases, such as AIDS and many more forms of catastrophic stress. He considered that these could, but not have led to sooner or later scientific inquiry, which would eventually begin to examine the multifaceted aspects of what major traumatization means and its potential long-term impact on human lives of such events. It was the recognition of the long-standing psychological problems of many war veterans, especially Vietnam veterans (Ehlers, 2000), and the observation of Holocaust survivors that were re-settled after World War II in Norway (Rothschild, 2000) that changed this view and convinced clinicians and researchers that people with sound personalities can develop clinically significant psychological problems if they are exposed to horrific stressors. This prompted the introduction of Posttraumatic Stress Disorder (PTSD) as a diagnostic category in the third edition of DSM (APA, 1980), which specified the experience of a traumatic event as a necessary condition for this diagnosis. This allowed for the recognition that traumatic events, such as combat, rape, man-made or natural disasters give rise to a characteristic pattern of psychological symptoms.

It has therefore only in recent years become evident that PTSD is a major health concern worldwide, which continues to be poorly recognized and not well treated, resulting in long-lasting morbidity (Davidson, 2000). Herbert & Wetmore (1999) observed that traumatic events can shatter lives and the consequences of Post-Traumatic Stress Disorder (PTSD) can be enormously costly not only to trauma survivors and their families, but also to the health care system and

society as a whole (Solomon & Davidson, 1997). Indeed, Davidson (2000) suggested that for those affected, the costs of PTSD are so heavy that PTSD must be viewed as among the most serious of all psychiatric disorders.

Only in the past two decades has there been an increasing convergence of interest in PTSD, with disciplines such as the neurosciences, experimental psychology, clinical psychology, psychiatry and sociology probing new areas of traumatic impact and discovering the complex psychobiological processes that control reaction patterns, symptom manifestation and other aspects of coping and adaptation following a traumatic event (Wilson, 1989; Wilson & Raphael, 1993; Wilson, 1995). This has allowed the emergence of an ever better and more comprehensive understanding of the various processes underlying PTSD and therefore has enabled for increasingly sophisticated treatment models of PTSD to be developed. Hence, it is no longer sufficient to give an overview of PTSD and to concentrate solely on the knowledge that has been yielded from the field of Clinical Psychology. In order to give a comprehensive overview, the next sub-sections of Section 2.1 on Posttraumatic Stress Disorder (PTSD) will, firstly, review the clinical features of PTSD and then reflecting this widening of interest, aim to represent the most important findings, that can currently be drawn from the emerging knowledge about PTSD in these various fields and which have shaped some of the theoretical foundations for the research of this dissertation to a greater or lesser degree, respectively.

2.1.2 THE CLINICAL FEATURES OF PTSD

Firstly, it seems important to describe what the clinical features of PTSD are. The source of these descriptions is mainly based on DSM-IV classification criteria (APA, 1994) unless otherwise indicated. One of the main determining features of PTSD is people's experience of intrusive reactions to the trauma. These include repeated and unwanted re-experiencing of the traumatic event (Joseph et al., 1995), during flashbacks (Lindy et al., 1992), where the person acts or feels as if events were recurring, intrusive images or sensory or emotional re-living, where traumatic images or pictures are presented again and again, and/or nightmares. These recollections of the trauma are often highly emotionally and physiologically distressing to individuals and they can cause severe arousal reactions, which are another central feature of PTSD. These arousal reactions can include sleep disturbance, with many PTSD sufferers experiencing delayed onset of sleep, mid-sleep or early morning waking, often resulting in a significant reduction in quality and duration of sleep experience. Other arousal symptoms include difficulties concentrating; irritability and anger, often in relation to relatively minor things, which before the trauma would have gone unnoticed; and hypervigilance, where people scan their environment for danger. Exaggerated startle responses, to both loud sound and sometimes sudden, unexpected movement are another feature of the arousal symptom cluster.

A third clinical feature of PTSD is the avoidance of stimuli associated with the traumatic event. Due to the often very distressing nature of the intrusive symptoms, people often attempt to avoid further distressing sensations, by trying to push their memories of the trauma out of their mind and not thinking or talking about it, especially about the worst aspects of their experience.

As Ehlers (2000) outlined, on the other hand people often ruminate excessively about questions that prevent them from coming to terms with the event, e.g., about why the event happened to them, about how it could have been prevented or about how they could take revenge. People also often avoid people or situations that remind them of the trauma or are connected to the actual trauma. A subtle part of people's avoidance are often a large variety of safety behaviours, which they use to prevent further trauma, but which are often a hindrance not allowing people to fully re-engage in feared activities again and even putting them sometimes in more danger, rather than providing a real help (Herbert & Wetmore, 1999). An example, of this would be the safety behaviours during driving, where a person suffering from PTSD following a road traffic accident, may brake and slow down long before approaching a junction in order to avoid another accident, but may, in actual fact, be putting themselves at greater risk through holding up the traffic flow behind them.

Other features of the avoidance symptom cluster are people's experiences of emotional numbing and detachment, where they may experience only a very small range, or even no range of emotions any longer, simply feeling 'cold' and numb inside. People are often distressed by their inability to no longer experience empathy towards others when witnessing their distress over difficult life situations. PTSD sufferers often describe that they feel that they have completely changed in their personality as a result of their experience of the trauma and close others often concur with this perception of personality change in their loved ones (Matsakis, 1994; Meichenbaum, 1994).

Another feature of PTSD is that people frequently have the feeling that their future is somehow cut short and sometimes this is so strong that they have stopped all planning for the future. This may be relating to the enormous shadow that the trauma casts on a person's life, because their memory and much of their available energy is stuck at the time of the trauma and therefore they may have little capacity left for perceiving a sense of future (Herbert & Wetmore, 1999). Frequently, people describe that they can't even cope with the present, let alone with the future.

Other associated features of PTSD are often experiences of shame and guilt (Rothschild, 2000), with trauma survivors commonly blaming themselves for what happened even when it was not their fault and there was no way of preventing it (Matsakis, 1994). Guilt is usually stronger when the person suffering from PTSD witnessed other people suffering or even dying during the trauma (Sinclair, 1993). It can be so strong that the surviving person feels that they don't want to live any longer. People also often feel guilty or shameful about the way in which they reacted during a traumatic event (Herbert & Wetmore, 1999). This seems to be especially prominent when the person responded in a way that is atypical of their normal, non-traumatic response pattern. Examples of this are, if a person reacted unusually adverse (Riggs et al., 1992), mediated by a strong fight response; or if a person ran away and saved themselves while they could hear others screaming for help as they were dying, mediated by a strong flight response; or if they froze into inaction and were unable to change or influence what happened to them during the trauma (which is often the case during the trauma of rape), mediated by a strong freeze response (Rothschild, 2000), which is also referred to as tonic immobility (Gallup & Maser, 1977).

Symptoms of dissociation and related features, such as, so-called 'out-of body' experiences or depersonalization; de-realization, where a familiar environment seems unfamiliar, strange or unreal; or a general reduction in awareness of surroundings, such as feeling in a daze or out of touch; can all be present in people suffering from PTSD (Blake et al, 1995, Herman, 1992).

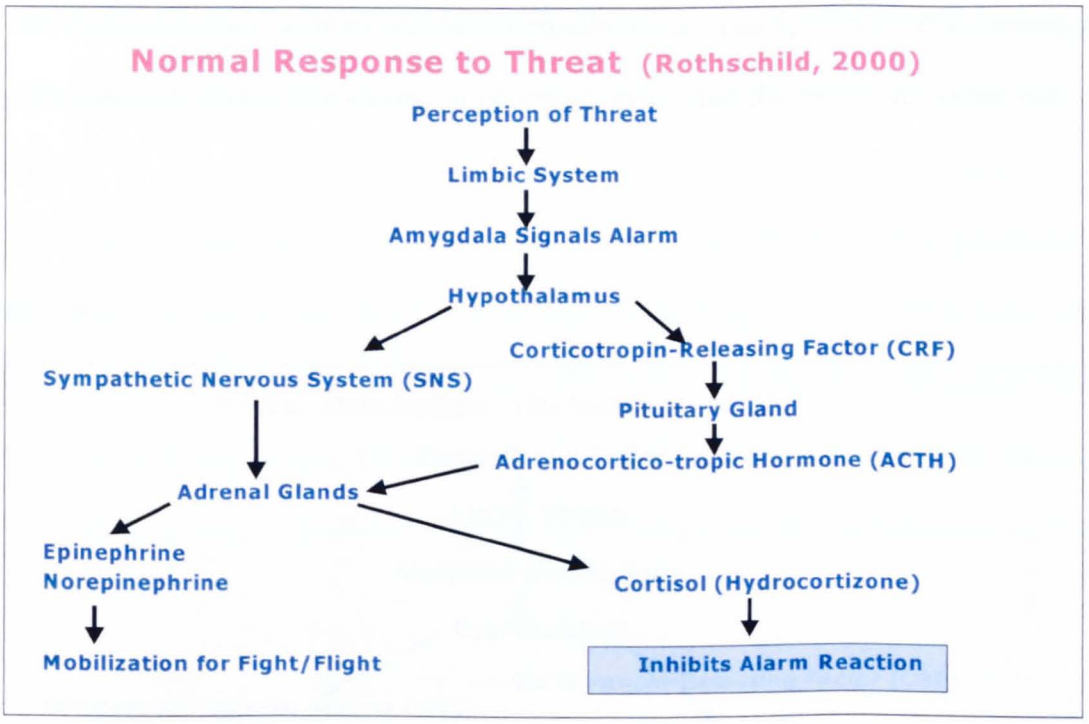
Traumatic grief (Prigerson et al., 1999) is another feature that can be linked to people's experience of PTSD, if they have lost people close to them. People also often suffer from secondary symptoms of clinical depression and anxiety (Brady et al., 2000), which can both lift following successful treatment of their PTSD. Van der Kolk et al. (1996a) have suggested that PTSD and its comorbid conditions should not be seen as separate disorders, but as 'complex somatic, cognitive, affective and behavioural effects of psychological trauma'.

2.1.3 THE BIOLOGICAL FEATURES OF PTSD

Herman (1992) suggested that psychological trauma is an affliction of the powerless. At the moment of trauma, the victim is rendered helpless by overwhelming force. In 1946, Hans Selye defined stress as a demand on the human system – mental, physical or emotional. Herbert & Wetmore (1999) outline that according to this model, overwhelming traumatic stress can be perceived as an extreme demand, a threat to existence, to which the body responds by automatically mobilizing all its coping mechanisms to provide the necessary energy for survival – the *fight, flight* or *freeze* reactions.

Rothschild (2000) illuminated the body's biological reactions to a traumatic event (as illustrated in diagram 1.a, below). Arousal, and therefore traumatic hyperarousal, is mediated by the limbic system, which is located in the centre of the brain between the brainstem and the

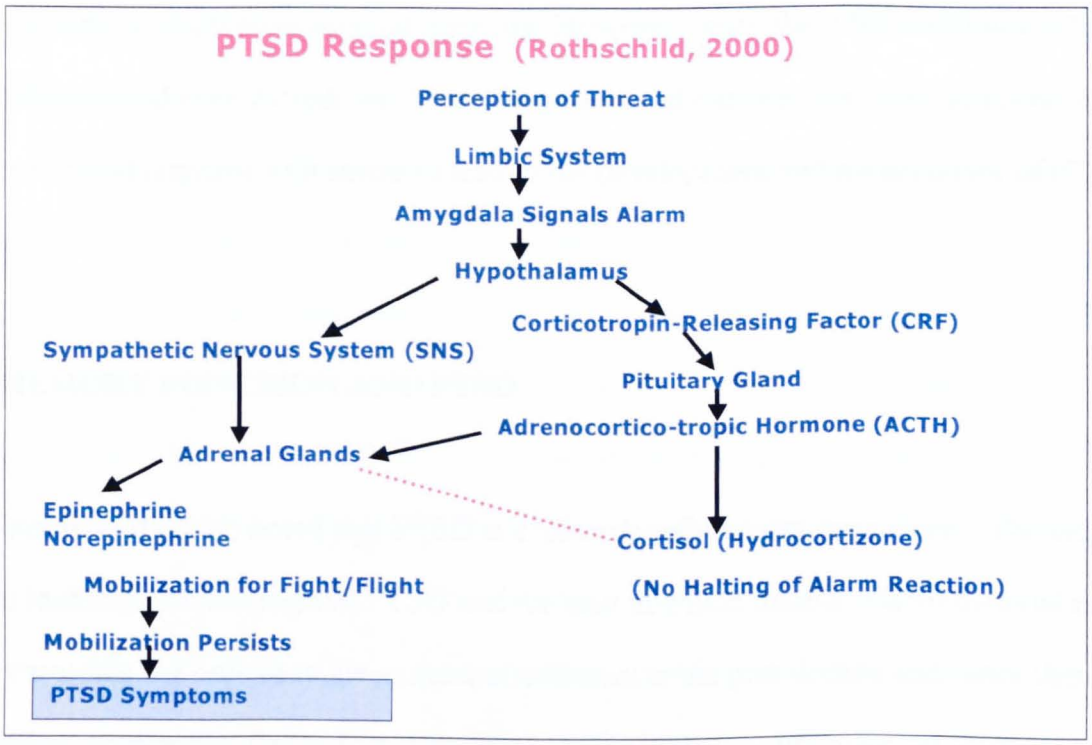
Diagram 1.a



cerebral cortex. The limbic system reacts to traumatic stress by releasing hormones into the body to prepare for defensive action. Two systems are simultaneously activated by the hypothalamus, following the perception of a threat: 1. the sympathetic nervous system (SNS) and 2. the corticotropin-releasing hormone (CRH). The activation of the SNS will stimulate the adrenal glands, which, in turn, release epinephrine and norepinephrine to mobilize the body for fight and flight responses. At the same time, the CRH is activating the pituitary gland to release

adrenocortio-tropic hormone (ACTH), which will also activate the adrenal glands, this time to release a hydrocortisone, cortisol. Once the traumatic incident is over and/or the fight or flight reaction has been successful, the cortisol will halt the alarm reaction and the production of the epinephrine/noreprinephene, helping to restore the body to homeostasis. Additionally, when death may be imminent, escape is impossible or the traumatic threat is prolonged, the limbic system can simultaneously activate the parasympathetic nervous system (PNS), causing a state of freezing (Rothschild, 2000). The chemical processes that cause the freeze are as yet not understood.

Diagram 1.b



Yehuda et al. (1990) discovered that in individuals with PTSD the adrenal glands do not release enough cortisol to halt the activated alarm reaction (as illustrated in diagram 1.b, above). However, it remains unclear whether this also applies to acutely traumatized people, as this population has as yet not been sufficiently scientifically evaluated. It is also likely that the continued alarm reaction typical of PTSD is not a purely biological process due to a deficiency in cortisol production, but that other mechanisms, such as perception in the limbic system influencing cognitions in a traumatized person also play a crucial role (Dunmore et al., 1999).

In summary, it can be deduced from a biological perspective that when the limbic system activates the autonomic nervous system (ANS) to meet the threat of a traumatic event, this is a normal, healthy and adaptive survival response. However, when the ANS continues to be chronically aroused even though the threat has passed and has been survived, this is no longer an adaptive survival response as it seems to lead to the development and maintenance of PTSD.

2.1.4 MEMORY FUNCTION AND PTSD

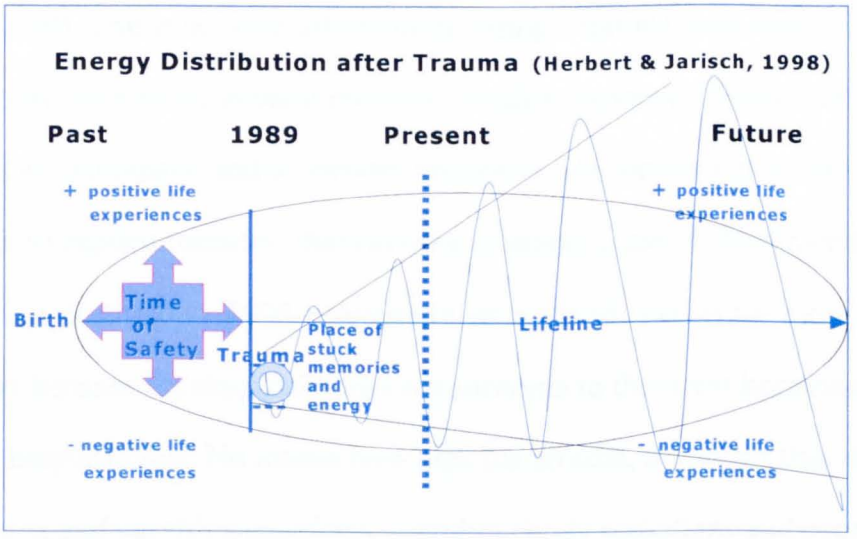
Rothschild (2000) noted that PTSD is a 'disorder of memory gone awry'. The interaction between memory functioning and PTSD and the way in which trauma related material encodes in memory systems has only been given more attention over the past decade and, since then, the implications of emerging findings are becoming increasingly important for the understanding of PTSD and its treatment. Nadel and Jacobs (1996) and van der Kolk (1994) found that the amygdala and the hippocampus are two parts of the brain that are centrally involved in the

recording, filing and remembering of events. The amygdala aids the processing of highly charged emotional material, such as horror, fear, anger, terror, and becomes very active both during and while remembering a traumatic event. The hippocampus, in comparison, allows for the organization of material in terms of time and space and puts memories into their proper perspective in terms of an individual's overall lifeline. It is this function that allows for events to have a beginning, middle and an end.

One of the features of PTSD is that a trauma often feels to people as if it hasn't ended and that it is still completely with them, even though the actual traumatic event may have happened several years ago. Herbert & Jarisch (1998) illustrated how the experience of a traumatic event often moves a person's entire memory focus and "available" energy to the time of the trauma and how it subsequently affects a person's experience of their life (Diagram 2, below). The line in the middle of the diagram is a person's lifeline. It starts at birth and then moves on through a period of relative safety. During this time a person would have both positive and negative life experiences, which on the diagram could take place on either side of the lifeline. Although most people will have to cope with negative or difficult life experiences at some stage in their life, in most cases they will have the resources to deal with these and cope relatively well. Their sense of safety, therefore, would have remained relatively intact. However, at the time of a trauma (illustrated by a hollow circle in the negative life experience area) it is as if most of the person's energy, including the focus of their memory system, gets stuck at that one place and continues to stay there from then on. In other words, from the time of the trauma onwards all of this person's subsequent experiences, whether positive or negative are overshadowed by the trauma. The diagram illustrates this by the curvy lines that emanate from the trauma circle, casting an ever-larger influence over this person's

present and future life. As Herbert and Wetmore (1999) outline, people often describe this experience in words like: "Everything in my life is clouded by the memory of the trauma" or "I am stuck at the time of the trauma". Ehlers & Clark (2000) referred to these experiences as 'frozen in time'. Additionally, the experience of trauma seems to have blocked all access to this person's previous sense of safety in their life. This is illustrated by the vertical line that runs through the trauma circle and cuts off the past.

Diagram 2



It has been found that the activity of the hippocampus often becomes suppressed during traumatic threat and therefore its usual assistance in processing and storing an event is not available (Nadel & Jacobs, 1996; van der Kolk, 1994). When this occurs, the traumatic event is prevented from occupying its proper position in the individual's history and continues to invade the present, as illustrated in the diagram, above. Rothschild (2000) suggested that this is the likely

mechanism at the core of the quintessential PTSD symptom of 'flashback' – episodes of reliving the trauma in mind and body. Van der Kolk et al. (1997) confirmed that it is the brain's failure to transform and integrate the sensory imprints associated with the trauma that causes people with PTSD to behave as if they were living in the past, even though they may be aware that their reactions are out of proportion with a current stimulus.

Another feature of traumatic memory is that its recall in a cohesive narrative is often either difficult, giving the recall of a traumatic event a very fragmented feeling, or outright impossible (Ehlers & Clark, 2000). This is because information during a trauma is stored in procedural or, now more commonly referred to, implicit memory. Implicit memory involves procedures and internal states that are automatic and it operates unconsciously, unless it is made conscious through bridging it to explicit memory, that narrates or makes sense of the remembered operation, emotion or sensation. Rothschild (2000) suggested that traumatic events are more easily recorded in implicit memory because the amygdala does not succumb to the stress hormones that suppress the activity of the hippocampus. No matter how high the arousal, it appears that the amygdala continues to function and upsetting emotions, disturbing body sensations and confusing behavioural impulses can all exist in implicit memory without access to information about the context in which they arose. Typically, therefore, individuals with PTSD are missing the explicit information necessary to make sense of their distressing somatic symptoms, experienced as body sensations, which are mostly implicit memories of trauma. Van der Kolk (1994) coined the phrase: "The body keeps the score", referring to PTSD sufferer's experiences of sensory body memories. Therefore, in order to help people recover from PTSD, they must understand their bodily sensations.

A third feature of memory function and PTSD, is that recall of traumatic memory is often state-dependent, which means that certain internal thoughts, feelings or sensations and external situations that, consciously or unconsciously, remind of aspects of the trauma, can trigger spontaneous recall of details, moods, information and other states associated to that event. Rothschild (2000) described "*it is not uncommon for a trauma to be recalled into awareness by an internal condition (e.g. increased heart beat, a particular mood) that is reminiscent of the original response to the trauma. This process can be set in motion by a multitude of classically conditioned external triggers: a colour, sight, taste, touch, smell, etc. It can even be initiated by exercise, excitement or sexual arousal. Anything that is a reminder of the trauma response is a possible catalyst*". This often makes the experience of PTSD feel overwhelming and out of control to people, as they often can't determine and understand what may have triggered their recall of distressing sensations. An important aspect of trauma therapy is therefore education about this mechanism, so that people can start to monitor and recognize the links between triggers and their subsequent reactions.

2.1.5 PSYCHOLOGICAL FACTORS UNDERLYING PTSD

The biological processes hypothesized to underlie PTSD seem to also provide valid explanations for the psychological factors, which are proposed to lead to and maintain PTSD. Ehlers et al. (1998), for example, showed that negative interpretations of the intrusive trauma memories (e.g. "I am going mad") after road traffic accidents was one of the most important predictors of PTSD one year after the index trauma. It might be argued that if sufferers of PTSD

are plagued by implicit, timeless, fragmented memories, which they can't put into speech and assign meaning to, they are more likely to assume that they must be going mad. Ehlers & Clark (2000) also proposed that insufficient elaboration of the event and its meaning leads to the re-experiencing symptoms of PTSD. They further argue that the re-experiencing in PTSD occurs because the trauma memory is inadequately linked to its context in time, place and other explicit, autobiographical memories. Stimuli that resemble those present during the traumatic event can thus trigger vivid memories and strong emotional responses that are experienced as if the traumatic event was still happening right now (consistent also with Diagram 2, described above). Foa & Rothbaum (1998) suggested that PTSD is characterized by a pathological network in memory that is particularly large and easily triggered. It contains many stimulus propositions that are erroneously linked to danger, causing fear responses to harmless stimuli to become associated with the traumatic event in memory. McNally (2000) has found that this attentional bias to stimuli that are reminiscent of the traumatic event is unintentional and subject to involuntary selective attention. Through this process, PTSD is not only maintained, but the fear response is generalized to harmless stimuli in present day life, which leads to an actual growth of 'the shadow of the trauma' over everyday life activities (Herbert & Wetmore, 1999; Herbert & Jarisch, 1998).

Several studies have found that avoidance, safety behaviours, thought suppression and rumination predict maintenance of PTSD (Dunmore et al., 1999; Ehlers et al., 1998). Ehlers & Clark (2000) suggested that these behaviours and cognitive strategies maintain PTSD in three ways. Firstly, some behaviour directly leads to increases in symptoms, e.g. thought suppression. Secondly, other behaviour presents changes in the problematic appraisals, e.g. excessively checking one's mirror after a road traffic accident prevents change in the appraisal that another

accident will happen if one does not check the mirror. Thirdly, other behaviour prevents the elaboration of the trauma memory and its link to other experiences, for example, avoiding thinking about the trauma prevents the person from incorporating the fact that they did, in fact, not die during the trauma into their trauma memory, and they therefore re-experience the same fear of dying that they experienced during the index trauma.

2.1.6 THE DIAGNOSIS OF PTSD

Having highlighted the main clinical features of PTSD, as well as various recent findings from different fields of PTSD research, it is important to now give some thought to the diagnosis of PTSD, which is an area that has pre-occupied trauma professionals since the first official diagnosis of 'Gross Stress Reaction or GRS', with the emergence of the first Diagnostic and Statistical Manual of Mental Disorders (DSM) in 1952 (refer to paragraph 2.1.1, above). The two areas that are of particular relevance in connections with a diagnosis of PTSD, are, firstly differences in the classification criteria used for a diagnosis of PTSD and, secondly, the difference between a 'single incident' trauma and 'repeated and prolonged' trauma. Both of these areas will now be discussed, below.

Currently, PTSD can be diagnosed using one of two psychiatric classifications systems. One is the International Classification of Diseases system, which is published by the World Health Organization and exists currently in its 10th edition, namely, ICD-10 (1993) and the other is the DSM classification system, which is published by the American Psychiatric Association and

currently exists in its 4th edition, namely, DSM-IV (1994). As Ehlers (2000) highlighted although both systems agree on the core symptoms of PTSD, *re-experiencing, avoidance, emotional numbing and hyperarousal*, they differ in the weight assigned to these. For example, DSM-IV emphasizes the avoidance/numbing cluster of symptoms more strongly, by requiring that a minimum of 3 of these symptoms must be met to qualify for a diagnosis of PTSD. ICD-10 research diagnostic criteria require a client to suffer either from hyperarousal symptoms or psychogenic amnesia. In contrast to DSM-IV criteria a client could be diagnosed through ICD-10 as suffering from PTSD in the absence of hyperarousal symptoms as long as amnesia is present. DSM-IV states two additional criteria, which are not included in the ICD-10 diagnosis. Firstly, that a diagnosis of PTSD requires a minimum symptom duration of 1 month, because any symptoms before this period of time would be diagnosed as Acute Stress Disorder. Secondly, DSM-IV criteria state that symptoms must cause significant distress or impairment in either social or occupational functioning.

Andrews et al. (1999) found that the concordance between the two diagnostic systems was only 35% and that DSM-IV criteria were far stricter, leading to a prevalence of only 3% of PTSD compared to 6.9% in the same large sample group if diagnosed using ICD-10 criteria. The latter has implications for accurately determining the prevalence of PTSD.

As outlined, above, the second area that needs to be discussed as part of the diagnosis of PTSD in terms of implications for treatment research, is the differentiation between 'single-incident' and 'prolonged and repeated' trauma. Although both can lead to the development of chronic PTSD, it has been observed that experience of prolonged and/or repeated trauma, for example, torture or periods of enforced confinement, and also especially, repeated trauma during

early developmental stages in childhood, such as childhood sexual abuse, frequently leads to symptoms of 'complex' PTSD (Herman, 1992). This entails that in addition to people frequently suffering from life-long symptoms of chronic PTSD, they may also, experience symptoms of dissociation, somatization, poor impulse control and affect regulation, self-destructive behaviour and unstable and unhealthy patterns of relationships. As yet, no official classification category of this type exists in the DSM-IV diagnostic system, but it is covered by ICD-10 under the diagnosis of "enduring personality changes after catastrophic experience". Terr (1994) discussed the differences in symptomatology between the two types of trauma and she distinguished 'Type I Trauma' to describe 'single incident traumas' from 'Type II Trauma', which described 'prolonged and repeated' experience of trauma, often from early childhood. Rothschild (2000) took up Terr's differentiation and proposed further refinements of this. She described Type I Trauma, as a single incident trauma and Type IIA Trauma, as characterizing individuals with multiple traumas who have stable backgrounds that have imbued them with sufficient internal resources to be able to separate the individual traumatic events from one another. She distinguished these from Type IIB trauma clients, which are so overwhelmed with multiple traumas that they are unable to separate one traumatic event from the other. A further sub-categorization recommended by Rothschild (2000) is that between Type IIB (R) Trauma, which describes people with stable backgrounds, but with a complexity of traumatic experiences so overwhelming that they could no longer maintain their previous resilience, such as, for example, Holocaust or torture survivors; and Type IIB (nR) Trauma, describing people, who were unable to develop resources for resilience in the first place. Although helpful for clinical practice and research, these distinctions have as yet not been officially accepted into any of the diagnostic classification systems.

Experience of prolonged and repeated trauma, Type IIB (nR) and (R), often leads sufferers to receive clinical diagnoses of one or several of the personality disorders, including borderline or multiple personality disorder. Therefore, therapeutic treatment for PTSD arising from 'prolonged and repeated' trauma would usually need to be more long-term and in-depth, focusing on other aspects than the resolution of the PTSD, only. Hence, when evaluating effective treatment techniques for PTSD, it should be, but frequently is not, stated whether a person is suffering from a 'single-incident' trauma, such as an assault or a road traffic accident only, or whether, the person may additionally have experienced repeated and prolonged trauma.

2.1.7 THE PREVALENCE OF PTSD

Estimates about the prevalence of PTSD following a traumatic event vary and studies in this area suffer from considerable methodological limitations (Hidalgo & Davidson, 2000). Their accuracy is confounded by the above outlined problematic of differing stringency in classifications systems, whereby prevalence rates measured with ICD-10 diagnostic criteria would be significantly higher than those determined by DSM-IV diagnostic criteria. Additionally, many epidemiological studies have made no distinction between PTSD caused by 'single incident' or 'prolonged and repeated' trauma, making it difficult to estimate health service utilizations and treatment costs for PTSD clients, as the two trauma groups would have differing needs in terms of both longevity of treatment, as well as, required skill of therapist, which, in turn, will have important cost implications. Thirdly, the nature of PTSD is such, that people avoid and they may therefore not readily agree to take part in epidemiological studies or they may underreport their

symptom severity.

Nevertheless, despite the above problems, it can be concluded from various large-scale studies that women are at about double the risk of men of developing PTSD in response to a traumatic event (Ehlers, 2000; Breslau et al., 1998; Kessler et al., 1995), that the type and severity of the trauma has an effect on the likelihood of developing PTSD (Hidalgo & Davidson, 2000), and that a history of previous affective and/or anxiety disorders is a significant predictor of the development of PTSD, independent of gender (Bromet et al., 1998). Breslau et al. (1997), for example, observed that the risk of developing PTSD (using DSM-IV criteria), following exposure to trauma was 13% for men and 20.4% for women. Kessler et al. (1995) found in an American based National Comorbidity Survey that the risk of developing PTSD after a traumatic incident was 8.1% for men and 20.4% for women. From their 1996 Detroit Area Survey of Trauma, Breslau et al. (1998) concluded that although recent research had often focused on combat, rape and other assaultive violence as causes of PTSD, sudden unexpected death of a loved one is a far more important cause of PTSD in the community, accounting for nearly one third of PTSD cases. Ehlers et al. (1998) found in a prospective longitudinal study that the prevalence of PTSD three months after a road traffic accident was as high as 18.2% for men and 28.9% for women. They observed that although about half of the people diagnosed with PTSD relating to the road traffic accident at 3 months (49.7%) recovered within a year of their trauma, for most of those that did not, suffering was severe and seriously interfered with people's normal functioning in life. Norris (1992) argued that road traffic accidents are probably the most deleterious precipitant of PTSD in terms of frequency and severity.

Studies have also looked at the comorbidity of PTSD with other disorders and symptoms. Kessler et al. (1995) found that, 88.3% of men and 78.1% of women diagnosed with PTSD were also suffering from other psychiatric conditions, such as anxiety, depression or drug abuse. They suggested that in the majority of cases, depression or drug abuse were secondary to the PTSD and in about half of the cases anxiety disorder was secondary to the PTSD. The high comorbidity with other psychiatric problems in PTSD and frequent medical consultations (Mayou et al., 1993) would seem to add further support to Davidson's (2000) argument that to sufferers of PTSD the costs are very heavy.

Considering the above, it would seem, that the development and identification of effective treatment methods for PTSD are of utmost importance, so that sufficient resources can be channelled into the appropriate treatment and alleviation of PTSD. Indeed, Section 2.2, below, will now examine the implications for treatment of PTSD, arising from the above presented findings and will then link these to the research conducted as part of this Thesis.

2.2 IMPLICATIONS FOR THE TREATMENT OF PTSD

2.2.1 COMPARATIVE EFFICACY OF THE TREATMENTS FOR PTSD

The size and potential severity of the clinical problem of PTSD indicate the need for effective early treatments of PTSD, which have to be feasible in routine clinical practice for large

numbers of people, most of whom are not usually followed-up by hospital emergency departments and who may never therefore receive appropriate help for their problems of PTSD. Acute Stress Disorder (ASD) has been identified as the precursor to the development of chronic PTSD. For example, Harvey & Bryant (1998) found that 80% of people with ASD after an RTA developed PTSD. Due to the recognition of the potentially detrimental effects of chronic PTSD, various methods for early intervention in response to trauma have been suggested over the years, starting with crisis intervention (Caplan, 1964), commonly used during the 1970s, which was followed by other models, such as Mitchell's (1983) Critical Incident Stress Debriefing or Dyregrov's (1989) model of psychological debriefing. Although slightly varying in format, psychological debriefing methods normally take place within a few hours or days after a trauma and involve participants providing a full narrative account of the trauma that encompasses facts, cognitions and emotions about the trauma, with the emphasis on normalization of the latter. Participants are educated about the typical reactions in response to trauma and they are prepared for later emotional responses, how to deal with these and where to find further support, if necessary. Until recently, debriefing was offered as an early intervention, based on the assumption that this was the optimal choice for the treatment of acute trauma clients. However, recent research has cast doubt on this assumption, ranging from findings that the debriefing approach might lead to a higher risk of developing adverse psychological reactions and functional impairments than documented for those receiving no debriefing (Mayou et al., 2000; Bisson et al., 1997), to findings that it was ineffective (Kenardy et al., 1996; Hobbs & Mayou, 1996) or that there was no difference in outcome between early psychological debriefing and the use of an educational control condition (Rose & Bisson, 1998), which both showed similar improvement over time. Some of these studies have been critized by Mitchell et al. (1998) for a. not clearly defining what the debriefing intervention

consisted of; b. not adhering to the group format in which debriefing was originally intended to be used; and c. for having used poorly trained debriefers. The jury is therefore still out on whether debriefing can be effective in preventing the later development of chronic PTSD. A few studies have also investigated treatments, other than debriefing, for ASD or acute PTSD. For example, Foa et al. (1995) provided recent sexual and non-sexual assault victims with four sessions of either CBT therapy or repeated assessments. They found that two months post trauma 10% of the CBT group met criteria for PTSD compared with 70% of the repeated-assessments group. Bryant et al. (1998) found that 5 sessions of CBT treatment with a group of clients suffering from ASD within two weeks of their civilian trauma led to a significantly greater rate of improvement (92%) compared to supportive counselling (17%) and to fewer cases of PTSD in the CBT group (17%) compared to the supportive counselling group (67%) six months post-trauma. Whilst promising, as yet little research exists about the effectiveness of early treatments of PTSD.

Scientific evaluation of treatment studies for chronic conditions of PTSD has also not been without its problems. Following a pattern common to most areas of research, seriously flawed early studies of PTSD treatment procedures have been replaced by studies that entail greatly improved methodology, procedures and experimental design (Foa & Meadows, 1997). To empirically evaluate the relative efficacy of various treatments for PTSD, Van Etten and Taylor (1998) conducted a meta-analysis of 61 treatment outcome trials. They calculated effect sizes separately for interviewer-rated and self-rated outcome variables, to eliminate potential bias in ratings between treatments (e.g. drug therapies) that are typically evaluated with interviewer-rated measures (which tend to yield consistently larger effect sizes) and those that are typically evaluated with self-report measures (e.g. psychological therapies). They compared the differences between

pre- and post treatment scores and measured effect sizes, where a $d = 1$ indicated that the treatment led to improvement by 1 standard deviation. Overall, they concluded that Cognitive Behaviour Therapy was the most effective psychological therapy for PTSD, followed by Eye Movement Desensitization and Reprocessing (EMDR), a relatively newer technique. They found that the effect sizes of both these therapies were large, the mean effect size for CBT was $d = 1.89$ for observer-rated and $d = 1.27$ for self-rated PTSD and the mean effect size for EMDR was $d = 0.69$ for observer-rated and $d = 1.24$ for self-rated PTSD. These results compared favourably to psychodynamic therapy, where only one controlled study could be identified, with a mean effect size of $d = 0.90$ for self-rated PTSD symptoms, which was a more effective result than the waiting list condition in that study.

There was also only one controlled study of hypnotherapy for PTSD, which yielded a mean effect size of $d = 0.94$ and was also more effective than the waiting list condition in that study. However, some concern about the use of hypnotherapy in the treatment of PTSD has been raised by Shalev et al. (1996), as it may induce dissociative states. The effect sizes of both CBT and EMDR also compared favourably to the pharmacological treatment of PTSD, for which Selective Serotonin Reuptake Inhibitors (SSRIs) were identified as the most effective drugs for PTSD with a mean effect size of $d = 1.43$ for observer-rated and $d = 1.38$ for self-rated PTSD symptoms. Despite the demonstrated effectiveness of SSRIs in their study, Van Etten and Taylor concluded that these may not be the treatment of choice for PTSD given the higher drop-out rates for all drug therapies. Further, it was not measured in this study whether treatment effects remain when medication is withdrawn as all post-treatment measurements took place prior to medication discontinuation.

Despite the demonstrated overall effectiveness of CBT for PTSD in this meta-analysis and other studies (e.g. Fecteau & Nicki, 1999), CBT outcome research for PTSD is based on different therapeutic protocols, utilizing different elements of CBT and, as yet, there is no unified agreement between clinicians and researchers on the most effective, active components of CBT treatment for PTSD. This is therefore an area of major current interest and further scientific investigations are needed in order to advance further understanding in this area. Section 2.2.2, below, will examine some of the findings in this area so far and then lead onto focusing on several elements of CBT for PTSD, which formed the basis for the current research dissertation.

2.2.2 EFFECTIVE INGREDIENTS OF CBT TREATMENTS FOR PTSD

Recent attention to behavioural and cognitive conceptualisations of PTSD (e.g. Ehlers & Clark, 2000; Foa et al, 1999; Joseph et al., 1997; Ehlers & Steil, 1995; Jones & Barlow, 1990) have increasingly been shaping the development of therapy for PTSD. Based on Mowrer's (1947) two-factor learning theory the behavioural model of PTSD is based on classical conditioning of fear during trauma and the subsequent learned avoidance of the conditioned stimulus situations. Ehlers & Clark (2000) have proposed a cognitive model of PTSD, which postulates that PTSD occurs only if individuals process the trauma in a way that leads to a sense of current serious threat. They suggest that two key processes account for this type of processing, 1. *'maladaptive' appraisal of the trauma and its sequelae* and 2. *the particular way in which the trauma is encoded into memory*. The latter produces vivid unintentional retrieval of the trauma, which leads to a person's perception that the

trauma is still happening in the 'here-and now' (refer also to diagram 2, above), thus inhibiting distinction between time and space and the linkage of the traumatic event with other autobiographical memories; as well as, poor intentional retrieval (inability to relate the story). Examples of 'maladaptive' appraisal of trauma include overgeneralization from the traumatic event to other non-dangerous events or activities; negative self-appraisal of how a person behaved during a trauma and negative appraisals of one's PTSD symptoms.

Based on these models, Cognitive Behavioural Therapy (CBT) for PTSD employs techniques that are aimed at modifying and correcting the underlying mechanisms, which are understood to maintain PTSD. As Ehlers (2000) outlined CBT for PTSD usually entails various (or all) elements of the following:

1. ***Education*** about people's reactions to trauma and the subsequent effect on their lives. Although most CBT treatments would contain an element of education, which is assumed to contribute to positive treatment outcome effects, the efficacy of CBT education in PTSD as a stand-alone treatment component, has as yet not been a main research focus.

2. ***Self-monitoring of symptoms***, which may in itself, carry a therapeutic effect. Tarrier et al. (1999), for example, observed that 4 weeks of systematic self-monitoring of intrusive PTSD symptoms led to considerable and stable improvement in about 10% of their clients.

3. ***Exposure treatments***, which lead to fear reduction of intrusive recollections of the event through either or both of two components (Foa & Rothbaum, 1998), *imaginal* and/or *in vivo*

exposure techniques. In *imaginal exposure* clients are asked to relive their experiences of the trauma, including their feelings and their thoughts, in imagination until the reliving no longer evokes high levels of negative arousal. *In vivo exposure* helps the client to confront (safe) situations or behaviours, which the client had previously avoided due to high levels of distress caused by their association of these stimuli with the trauma. Exposure is repeated until the client can safely master the situation or behaviour without experiencing high levels of distress. Exposure treatment of PTSD has been found to be superior to supportive psychotherapy and relaxation treatment (Foa & Meadows, 1997; Marks et al., 1998). Ehlers & Clark (2000) propose that there are probably several mechanisms for the efficacy of exposure treatment. Firstly, clients realise that exposure does not lead to the feared outcome (e.g. lighting a candle at home will not lead to a fire or another explosion, in a person having survived a gas explosion). Secondly, the repeated reliving of the event helps clients to create an organized memory and facilitates the distinction that intrusive thoughts and images are memories rather than something happening in the here-and-now. Although, exposure has been found a very effective component of CBT in many studies, it does not appear to work so well in clients with traumatic memories resulting from being the perpetrator of crime (Foa & Meadows, 1997) or survivors of complex and prolonged trauma (Type IIB (R)), such as torture, war or captivity (Shalev et al., 1996).

4. ***Cognitive restructuring,*** which is aimed at helping clients identify and modify excessively negative appraisals of the trauma and its sequelae (Resick & Schnicke, 1993) through methods, such as, identification of thinking errors, imagery modification, evaluating the evidence for and against the appraisal, etc. Cognitive restructuring has been shown to be an effective technique in

the treatment of PTSD on its own without the use of imaginal exposure (Tarrier et al., 1999; Marks et al., 1998).

5. ***Anxiety Management (stress inoculation),*** aimed at teaching clients a set of skills that help them cope with stress, such as relaxation training, training in slow abdominal breathing, stopping of unwanted thoughts, assertiveness training and training in positive thinking (Meichenbaum, 1994). Although anxiety management is more effective than supportive counselling, in the long-term it appears less effective than exposure treatment (Foa & Meadows, 1997). Relaxation treatment on its own is less effective than exposure and cognitive restructuring in the short- and long-term (Marks et al., 1998).

6. ***Anger Management,*** helps to reduce the level of anger in clients with severe arousal problems following PTSD. It has been found that anger, while temporarily relieving fear and distress, may in the long run impede emotional processing of the trauma and therefore prolong the suffering (Foa et al., awaiting publication). Therefore it may not be helpful to directly promote the expression of anger in PTSD clients, but to apply strategies aimed at reducing anger in order to prepare the ground for later trauma processing work.

In summary, although there are various elements that might all or partially form part of a CBT treatment protocol for PTSD, it has generally been found that CBT is an effective treatment modality for the reduction or amelioration of PTSD. While it is positive that clinical treatment research has sufficiently advanced to identify a therapeutic method that can be helpful in reducing the suffering from PTSD, current clinical practice within the National Health Service and also

Private Practice settings face major resource limitations. Lovell & Richards (2000) observed that due to the overall effectiveness of the CBT approach and the relative shortage of skilled CBT practitioners or limited accessibility to these, demand for CBT treatment is likely to exceed supply. This would also apply to resource implications in the case of the use of CBT treatments for PTSD. They suggested that, in order to provide CBT services that are not only evidence based but also accessible, innovative and cost effective, the use of alternative treatment delivery models needs to be examined more closely. Section 2.3, below, will therefore briefly examine the utilization of CBT materials for self-help as one such strategy and will focus, especially on the development and qualitative evaluation of an educational CBT trauma booklet, which was especially written for survivors of PTSD and their families, which will form the basis for the scientific investigation of this dissertation.

2.3 THE UTILIZATION OF EDUCATIONAL CBT MATERIAL FOR SELF-HELP

2.3.1 CBT SELF-HELP MATERIAL AS A POSSIBLE TREATMENT DELIVERY MODEL

Considering the limitations in ready availability of skilled CBT practitioners the use of CBT self-help reading materials has been examined as one such model of alternative treatment delivery. CBT focused bibliotherapy has been examined among a range of mental health problems with promising results, for example, for chronic fatigue (Chalder et al, 1997), agoraphobia (Matthews et al., 1977), OCD (Fritzler et al., 1997), panic (Gould et al., 1993; Gould & Clum, 1995), binge

eating (Carter & Fairburn, 1998), anxiety disorders (White, 1998), specific phobia (Hellstrom & Ost, 1995), depression (Bowman et al., 1996), recurrent deliberate self-harm (Evans et al., 1999) and a postal self-help booklet to improve nightmares (Burgess et al., 1998). Bower et al. (in press) conducted a systematic review of self-help treatments for anxiety and depressive disorders in primary care. They examined eight written interventions based mostly on behavioural principles. Although the majority of trials reported significant advantages associated with self-help treatments, the quantity of subjects included in studies was small and most suffered from a number of methodological limitations and included no data concerning the long-term clinical benefits or cost-effectiveness. They concluded from this review that self-help treatments may have potential to improve access to effective treatments in a cost-effective way. However, the available evidence is limited in quantity and quality and more rigorous trials are required in order to provide accurate estimates of the clinical effectiveness of these treatments. As yet, the use of a CBT-based educational trauma booklet as a self-help treatment method for PTSD has not been researched and this will be the focus of the present dissertation.

2.4 AN EDUCATIONAL CBT TRAUMA INFORMATION BOOKLET

2.4.1 DEVELOPMENT OF THE TRAUMA INFORMATION BOOKLET

In 1995, the present author wrote an educational trauma information booklet for survivors of trauma and their families, as part of a Regional Research Scheme, funded by the Oxfordshire

Regional Health Authority (Grant HoN 94/09). The booklet was written in order to enhance control and understanding in survivors of trauma, based on clinical observations that so few of PTSD clients seemed to understand the nature of their symptoms and often secretly seemed to fear that they were going mad. The research employed four different phases.

The aim of the ***first research phase*** was to determine the user's needs. Interviews were carried out with five survivors of different single-incident trauma, who had completed their CBT treatment for PTSD with another Clinical Psychologist in an NHS Adult Psychology Service and had successfully recovered from their trauma. Participants took part in a comprehensive, semi-structured interview, lasting between 3 to 4 hours. Detailed information was obtained about each participant's trauma; the history of the help and information they had received; understanding of their past trauma responses; assessment of helpful coping strategies they had used; preference of the type of information that would have been helpful to them in a trauma booklet after their experience of the trauma; and any other information that they would find helpful to be included in a trauma information booklet. Participants indicated that in terms of *booklet content*, they would find the following helpful: a. examples and stories of other people to give readers hope and support; b. an explanation that people are not mad and that they can get better again; c. knowledge of some of the things that helped others; d. understanding of the common feelings after trauma and that people are not alone with this; e. something about the effect on partners; f. something about anger; an explanation of feelings of fear; g. advice on how and where to seek help. Participants also expressed views about the *style and format* that such a booklet should have: a. easy chapters; b. not too difficult to read, but also not treating the reader like a child; c. no medical or professional jargon; d. should be empowering – not stigmatising or labelling; e. should

have an image on the cover that draws people's attention to it; f. it needs to make people feel that they can establish a personal connection to it; g. needs to be written so that people could show it to their partners; h. should be written so that people can read bits and put it away before picking it up again, because concentration is a major problem; and i. should be something that can be given to trauma victims immediately after a trauma as well as later on.

The ***second research phase*** concentrated on the writing of a pilot booklet, which drew on the collected feedback from the first research phase as well as on latest CBT-based research knowledge of PTSD at the time and the current author's practice as a Chartered Clinical Psychologist and a Registered Cognitive Behavioural Therapist working in the area of PTSD. The booklet explained

Table 1

Part 1: Understanding trauma and your reactions to it

- **Introduction**
- **What is a trauma?**
- **Who is the booklet written for?**
- **Why can trauma have such a big psychological effect on you?**
- **How do people make sense of and adjust to trauma?**
- **The most common ways of reacting to trauma:**
  - **Re-experiencing the trauma**
  - **Numbing and avoidance reactions**
  - **Reactions of increased arousal**
- **Other reactions to trauma:**
  - **Reactions linked to loss of a person close to you**
  - **Physical disfigurement**
  - **Depression**
  - **Guilt/Self Blame**
- **What is posttraumatic stress disorder (PTSD)?**
- **Why don't all people react in the same way to trauma?**

and normalized the typical symptoms of PTSD and discussed ways of coping with the post trauma reactions. It included a Preface, an Epilogue and two major parts. *Part 1: 'Understanding trauma and your reactions to it'* included nine subheadings, addressing the areas, outlined in table 1, above.

Part 2: 'Coping with the trauma' focussed on seven subheadings, addressing the areas outlined in table 2, below. The booklet was written in an accessible style and included examples of trauma clients' experiences (maintaining confidentiality) in order to illustrate the common reactions to trauma. This was thought to also help people realize that they were not alone with their feelings.

Table 2

Part 2: Coping with the trauma

- **The process of re-building your model of life**
- **Some things that might help you start with your process of recovery**
  - **Getting it out – talking about it**
  - **Ways of talking through the trauma**
  - **Coping with anxiety**
  - **Coping with anger and irritability**
  - **Sleeping problems**
  - **Alcohol and Drugs**
  - **Medication**
- **How to get professional help?**
- **If you are in therapy, stay with it – don't give up too soon!**
- **Effect on your family or partner**
- **Further reading**
- **Contact addresses**

The booklet also carried advice on how to read it considering that reading is often not an easy task for people suffering from PTSD. It stated that people could read short sections at a time rather than the whole booklet at once, focussing on those parts that were most relevant to them. The pilot booklet contained 64 pages, written in A5 format and had a Flesch-Kincaid Reading Ease (Microsoft, 1995) score of 60, indicating a standard level of readability.

The ***third research phase*** preliminarily tested the pilot trauma booklet with a small group of clients (N=6) suffering from chronic PTSD, who were given the booklet at the end of their routine clinical PTSD assessment at their Adult Psychology Service. The assessment lasted between 2 – 3

Table 3:

Sample Description

Trauma booklet (N =6)	Non-trauma booklet (N = 5)
* Gender: 5 male, 1 female * Mean age: 43 years * Mean time since index trauma: ⊃ 10 months *Types of trauma: ⊃ Physical assault (3) ⊃ War: Witnessing Killings ⊃ Armed Raid ⊃ Road traffic accident *Type of help received: ⊃ Initial medical help ⊃ Psychiatric assessment (2) ⊃ None had informed knowledge of their psychological responses at the time of their assessment	* Gender: 1male, 4 female * Mean age: 32 years * Mean time since index trauma: ⊃ 9.5 months *Types of trauma: ⊃ Road traffic accident (3) ⊃ Stabbing ⊃ Rape *Type of help received: ⊃ Initial medical help ⊃ Previous psychological help for non-trauma related problem (2) ⊃ None had informed knowledge of their psychological responses at the time of their assessment

hours and clients were encouraged to read the booklet with the explanation that this trauma booklet was a pilot version that had been written in conjunction with other survivors of trauma

and that one of the aims of the current study was to test how useful it really was. They were encouraged to use the pilot trauma booklet in conjunction with their current difficulties and find out how well it related to their problems. They were encouraged to use the book like a manual that they could write in and use in a way most suited to them, e.g. reading it in chunks, having it read to them, etc.. They were told that their feedback would be really important, because they had the possibility to change things that they felt weren't working about the pilot booklet at the moment. They were compared to a small control group of clients (N = 5), who were not given the trauma booklet as part of their routine clinical PTSD assessment. Allocation to these groups was random, but as can be seen from table 3, above, the demographics of the two sample groups are quite varied due to the nature of this research taking place in a clinical, not a research setting. The major differences between the two sample groups was in their gender, with the experimental group being almost exclusively male, bar one subject, with the exact reverse being true for the control group. Another problem lies with the diversity of types of trauma experienced between the 2 groups, which could potentially have biased the response to the trauma booklet.

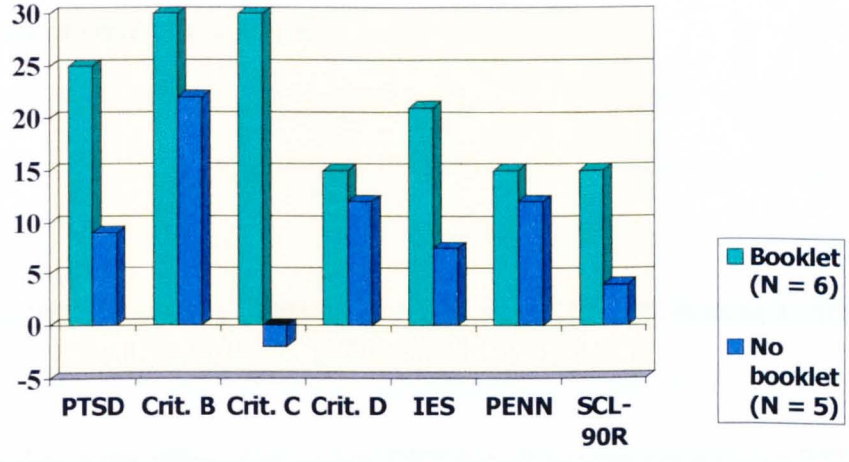
Subjects in both groups were assessed using a number of self-scoring questionnaires, namely the PTSD Symptom Scale (PSS, Foa et al, 1993), the Impact of Event Scale (Horowitz et al., 1979), the PENN Inventory (Hammarberg, 1992) and the General Severity Index of the Symptom Checklist-90R (Derogatis, 1977). It was found, that the booklet group experienced a greater percentage reduction in their symptoms compared to the non-booklet control group (N=5). As can be seen from table 4, below, the difference in scores was most pronounced on Criterion C of the PSS, which measures PTSD avoidance symptoms, but not so strong in relation to the PTSD re-experiencing symptoms (Crit. B) or the PTSD hyperarousal symptoms (Crit. D). All subjects

complied with the reading of the trauma booklet.

Table 4

Results of Quantitative Assessment Measures

Mean % reduction in Severity Scores



While these results seemed promising, unfortunately, the sample was too small and too diverse to test the statistical significance of these results. Additionally, the study suffered in that the author of the booklet was also the person handing out the booklet and encouraging people to make use of it, therefore potentially biasing motivation. All booklet group clients were also asked to complete a trauma booklet evaluation questionnaire for qualitative feedback about the trauma booklet. This assessed subjects' compliance with the reading of the booklet and their perception of the usefulness the pilot booklet. Subjects were encouraged to make suggestions for improvement of the pilot booklet.

The ***fourth research phase*** utilized the results from the pilot booklet evaluation trial to make any necessary editorial or design changes to the booklet before its final printing. The overall response to the pilot trauma booklet was favourable. Based on the feedback, some of the sentences were shortened; the language was simplified further to avoid any words that could be perceived as 'jargon'. New chapters on 'Understanding sexual difficulties' and 'Coping with sexual difficulties' were also included in the final version of the trauma booklet. The overall length, depth or breadth of the trauma booklet were not changed.

2.4.2 QUALITATIVE EVALUATION OF THE TRAUMA INFORMATION BOOKLET

Before studying the efficacy of such a CBT-based trauma booklet for PTSD in a randomised controlled trial, it would be useful to understand the conditions under which such a booklet might be helpful. Dunmore et al. (1999), for example, found that if people interpret their initial PTSD symptoms as signs that they are going mad, going to lose control or as signs of permanent change to the worst (negative appraisal of PTSD symptoms) they are less likely to recover. Although CBT treatment involves the challenging of such thoughts, clients who have held these beliefs for a long time may find it difficult to accept that there are alternative explanations of their reactions and that indeed these are quite common. The use of the trauma booklet was therefore evaluated with 42 people, undergoing a course of CBT treatment for their chronic PTSD at a clinical research setting (Herbert et al., in prep.). This study aimed to, firstly, assess people's compliance with reading and their perceived helpfulness of the booklet and, secondly, examine

factors relating to people's compliance and the perceived helpfulness of the trauma booklet. The results from that study indicated a very high compliance rate with the reading of the trauma information booklet. All but one client (N = 41) read the booklet or parts of it and the majority of clients (71.4%) reported reading the entire booklet. The one non-compliant client reported that her failure to read the booklet had to do with personal issues at work and subsequent lack of time and not with the idea of reading a booklet on trauma or other issues related to the booklet, itself.

The majority of clients (N = 40) perceived the trauma booklet or parts of it as helpful, only 2 clients did not find the booklet helpful. Qualitative feedback from clients suggested that one of the most helpful aspects of the trauma booklet was that it confirmed to clients that *"their reactions were common and understandable reactions in response to a trauma"* and that they 'were not going mad', which Ehlers et al. (1998) found one of the most important predictors of PTSD 1 year after the trauma. Based on these findings, it was concluded that the additional reading of the trauma booklet reinforced one of the active ingredients (the challenging of negative appraisal of the PTSD as part of cognitive restructuring) of a CBT approach for PTSD.

Another aspect that several clients found helpful was *"the recognition that they were not alone and that other people were suffering in the same way as they were".* PTSD often makes sufferers feel that others don't seem to understand and may even express that the PTSD sufferer ought to "have got over it by now", especially if the trauma lies some time in the past and people have healed completely from their physical injuries. Unfortunately, sometimes these messages are even given by other healthcare professionals, such as G.P.s, who may not have sufficient knowledge of the psychological effects of trauma (Herbert & Wetmore, 1999). These messages can not only lead to

further traumatization, but also serve to reinforce PTSD sufferers' symptoms of detachment from others, thus making PTSD a very lonely and isolated experience. Therefore, the knowledge that people's feelings are not uncommon and are also experienced by others, helps people feel that they are not entirely on their own and thus re-establishes connectedness and normalizes sufferer's PTSD symptoms. It was concluded that both of these aspects, which are desirable elements of CBT for PTSD, seemed to be further reinforced by the additional reading of the trauma booklet, thus potentially aiding the therapeutic process.

The third aspect that several people found helpful about the trauma booklet was that it provided clients with *"an understanding and explanations of their reactions to trauma"*. One of the features of PTSD is that it can make people, who had felt much in control over their lives before the trauma, feel helpless and out of control. These feelings of lack of control over their symptoms, such as intrusions or flashbacks, often leads people to negatively appraise themselves, as 'being unable to cope', 'there being something wrong with them' or 'never being able to get over it'. Foa et al. (1999) found that negative self-appraisal is one of three factors differentiating people who have experienced a trauma without subsequently developing PTSD from those who develop PTSD. It was concluded that furnishing clients with greater understanding of their reactions to trauma through a trauma booklet, would help enhance their feelings of control and may therefore provide a challenge to their previously negative self-appraisal.

The majority of clients (94.9%) reported that they would recommend the booklet to a friend, they knew was suffering from the experience of trauma. Considering the extremely low rate of non-compliance with reading the trauma booklet, it was not possible to indicate factors that

may be influencing total non-compliance. Factors relating to 'non-compliance' were therefore measured by examining differences between the clients who had read the entire booklet and those that had read only parts of it. One almost significant trend that emerged was that clients who were educated up to GCSE level or less were less likely to read the entire booklet compared to clients educated to higher levels. However, no significant correlation emerged between helpfulness and education, suggesting that to most clients the trauma booklet was a helpful therapeutic medium.

A factor that had a significant effect on compliance was clients' experience of previous episodes of major clinical depression, although their current experience of major clinical depression was unrelated to compliance. It was thought that clients, who had experienced depressive episodes in the past, were generally less hopeful about outcome of treatment and less motivated to read and understand about their symptoms of trauma. Support for this hypothesis was drawn from the finding that the correlation (although not statistically significant) between perceived helpfulness of the booklet and past history of depression followed a negative direction, whereas the correlation (also statistically non significant) between current depression and helpfulness and compliance followed a positive direction.

The only factor significantly affecting perceived helpfulness of the booklet was dissociation. It may be argued that clients suffering from high levels of dissociation would have found it harder to engage with the content of the booklet and thus to benefit from its potentially therapeutically helpful elements. PTSD severity, the level of anxiety and factors, such as concentration problems and cognitive avoidance had no significant influence on compliance or perceived helpfulness of the booklet. The percentage change in symptom severity three weeks after the distribution of the

trauma booklet, if calculated as overall percentage change compared to baseline did not prove to be a significant factor. However, for those clients, who were identified as treatment responders, indicated by a change of 50% or more in PTSD symptom frequency (as recommended by Foa et al, 1991), a significantly positive correlation emerged between treatment response and perceived helpfulness of the trauma booklet. Unfortunately, the design of that study made it impossible to determine, whether this is due to the fact that clients who responded positively to their CBT therapy after 3 weeks were more likely to find the booklet helpful as it further reinforced elements of their therapy, or whether clients who found the trauma booklet helpful were more likely to gain a direct therapeutic effect, which enhanced their rate of progress in therapy.

In January 2000, the trauma booklet was translated into the Turkish language by Doç Mehmet Sungur, University of Ankara, Turkey and subsequently distributed to 30,000.00 survivors of the Turkish earthquakes between Izmit and Adapazari on 17th August 1999 and south of Düzce on 12th November 1999. Qualitative evaluation of a small subgroup of 299 people (more data is currently being evaluated) who received the trauma booklet and who completed and returned a Turkish translation of the trauma booklet evaluation questionnaire indicated similarly positive results to those found in the above described study. 95.3% of people reported complying with the reading of the trauma booklet (61% completely and 33% partially) and 6% reported not reading the trauma booklet. There was a significant effect between clients' educational level and their compliance with reading the booklet. 88% of people reported that they had found the trauma booklet helpful (8.3% - The best I've read; 57% - Generally very helpful; 29.7% - Some parts were helpful) and 5% of people reported that the booklet was not helpful (4.2% - not helpful and 0.8% - not at all helpful). 98.1% of people indicated that they would recommend the trauma booklet to

others and 1.9% indicated that they would not do so (presented at 31st Annual Congress of the European Association of Behavioural and Cognitive Therapies in Istanbul, Turkey in September 2001). In depth qualitative evaluation of the current and further data is still presently ongoing. Although the Turkish data indicates good, preliminary results for compliance with reading and perceived helpfulness of the trauma booklet, due to this study taking place in an earthquake area, which at the time was very under-resourced in terms of the professional help that was available, it was not possible to determine the PTSD status of the people who had read the trauma booklet. The data therefore does not indicate whether all the people reading the trauma booklet had actually been traumatized by the earthquake that they had experienced.

2.5 OUTLINE OF THE CURRENT STUDY

2.5.1 RATIONALE

Both preliminary testing of the trauma booklet during the pilot research phase and the qualitative evaluation of the booklet with clients receiving CBT treatment for their chronic PTSD indicated positive results. Given the high economic and personal costs of suffering from PTSD and the lack of professional resources currently available for the effective treatment of chronic PTSD within NHS settings, it seems important to investigate methods of early intervention for PTSD, which are cost-efficient and easy to deliver, also potentially by staff not trained in the

administration of psychological therapies. The current research study therefore tested the efficacy of the trauma information booklet as part of a randomised controlled trial with subjects suffering from acute PTSD following a road traffic accident. It is proposed that if the trauma information booklet was found to be effective in reducing PTSD symptoms with RTA victims compared to a waiting list control group, it would have direct clinical implications for the early treatment of RTA survivors:

1. The use of a trauma booklet as an early intervention after a RTA would be a very cost-efficient method of providing therapeutic information and potentially preventing the development of chronic PTSD and its secondary consequences.

2. It would have the additional advantage that it could be given early in the development of PTSD to a large number of clients. Therefore, if the trauma booklet proves to be effective in reducing PTSD symptoms compared to the waiting list control condition it would be advisable to incorporate it into routine clinical practice for RTA clients who have developed PTSD.

3. Additionally, the results of this dissertation could also yield useful information that could be relevant to victims of other traumas.

2.5.2 RESEARCH QUESTIONS

The following research questions formed the basis for the current investigation:

1. Is the use of a trauma booklet effective in reducing symptoms of PTSD?

It will be assessed whether the trauma information booklet given out during a single session of advice is more effective in reducing PTSD symptoms of clients suffering from PTSD, following a road traffic accident (RTA) compared to a no intervention (waiting list control) condition in the short term (3 weeks and 3 months afterwards) and in the long-term (follow-up one year after the accident).

2. Is the use of a trauma booklet effective in reducing symptoms of anxiety and depression?

Effects of the trauma booklet on anxiety and depression will also be assessed, with measures being taken at the same time points as outlined under research question 1., above.

3. Is compliance with reading the trauma information booklet related to outcome?

It will also be assessed what proportion of clients actually read the trauma information booklet and how helpful they perceive it. The relationship of compliance and outcome will be investigated.

2.5.3 HYPOTHESES

1. Hypotheses relating to the effectiveness of the trauma booklet

1.1 Clients in the trauma booklet condition will show a greater reduction in their symptoms of PTSD following their RTA at 3 weeks, 3 months, 6 months and 9 months follow-up than clients in the waiting list control condition.

1.2 Fewer clients in the trauma booklet condition will request CBT treatment at the time of their 9 months' follow-up assessment than clients in the waiting list condition.

1.3 Clients in the trauma booklet condition will show a greater reduction in anxiety and depression at 3 weeks, 3 months, 6 months and 9 months follow-up than clients in the waiting list control condition.

2. Hypothesis concerning relationship of compliance with reading the booklet and outcome

2.1 There will be a positive relationship between the perceived helpfulness of the trauma booklet, compliance and improvement in PTSD symptoms in clients assigned to the trauma booklet condition.

3.0 METHOD

3.1 PARTICIPANTS

Participants were drawn from a population of clients who had attended the Accident & Emergency Department of two large General Hospitals, following their RTA. All potential participants were first put through a screening procedure which happened within a period of up to 6 months following their RTA, consisting of, ***firstly***, being sent a version of the PTSD Diagnostic Scale at 6-weeks after the RTA (PDS, Foa et al., 1997) inviting people to fill this out and send this back if they would like to be considered for a RTA follow-up programme to help them get back to normal after their RTA, ***secondly***, a standardized clinical assessment interview with a clinical psychologist (baseline assessment session) between 2 and 5 months after the RTA, ***thirdly***, a three-week symptom self-monitoring phase and ***fourthly***, the administration of the Clinician Administered PTSD Scale (CAPS-DX, Blake et al., 1995) by an independent assessor. If people still met full criteria to satisfy a diagnosis of PTSD and their score on the PDS was of a severity of 14 or more (cut-off based on study by Ehlers et al, 1998), they were considered eligible for inclusion into the programme. Exclusion criteria from the programme included brain damage or spinal cord injury as a result of the RTA; unconsciousness for more than 15 minutes; no memory of the RTA; as well as chronic major psychiatric disorders (e.g. schizophrenia, manic-depressive illness or psychosis); current drug and alcohol dependence; and borderline personality disorder or other severe current psychiatric problems, which were considered needing immediate intervention.

A total of 55 participants met inclusion criteria and 28 of these were randomly assigned to the trauma booklet group (experimental condition) and 27 of these to the waiting-list group (control condition). Over the course of the RTA programme, three people dropped out of the

Table 5: Description of the Sample

Demographic Data	Booklet (N = 25)	Control (N = 25)
Age (years)		
Mean	39.11	36.73
Standard Deviation	*(10.67)*	*(12.66)*
Gender		
Female	17 [68.0%]	17 [68.0%]
Male	8 [32.0%]	8 [32.0%]
Education		
Higher Education	16	8
A-Levels	0	5
GCSE	7	11
None	1	-
Other	1	1
Time from RTA to random allocation (allocation session)		
Mean (weeks)	19.40	17.67
Standard Deviation	*(5.61)*	*(4.49)*
Baseline Severity of Symptoms		
PDS Frequency		
Mean	29.60	28.31
Standard Deviation	*(8.26)*	*(6.73)*
BDI		
Mean	21.56	20.68
Standard Deviation	*(9.37)*	*(7.78)*
BAI		
Mean	22.56	21.68
Standard Deviation	*(9.60)*	*(7.99)*

trauma booklet group for the following reasons: one sought treatment with antidepressants; one moved abroad and one sought other treatment; and two people dropped out of the waiting-list group, for the following reasons: one was already a poor attendee during assessment interview procedures and one sought psychological treatment). Therefore, final results will be reported on 25 participants in the trauma booklet group and 25 participants in the waiting list control group.

Table 5, above, presents some of the demographic data of the sample and it can be seen that the two groups are very evenly distributed in terms of their age and gender. There are some differences in their educational levels, with the trauma booklet group having more people in higher education, but none with A-level education only and one person who had received no education at all. Also presented are participants' scores on the PTSD Diagnostic Scale (PDS), the Beck Depression Inventory (BDI) and the Beck Anxiety Inventory (BAI) for the trauma booklet and the waiting list control groups. Scores fall into the moderate range of severity on all three measures of PTSD, depression and anxiety. Statistical analysis confirmed that the distribution between the two groups on all measures are normally distributed and that there were no group differences on any of the measures.

3.2 DESIGN

The research design is a randomised controlled trial to evaluate the efficacy of treatment for acute PTSD following a RTA, based on a single session of individually tailored advice to clients combined with the handing out of a trauma information booklet. The research was combined with

a large-scale on-going research trial taking place at a University Department of Psychiatry (names of the programme directors are included in Appendix I), evaluating the effectiveness of specialist CBT treatment. For the purpose of this dissertation, efficacy in improving the symptoms of PTSD will be measured, comparing two conditions: *1.* 25 clients receiving a single session of advice and linked with this a trauma booklet, and *2.* 25 clients in a waiting list control condition.

The design is a repeated measures design and outcome measures of PTSD symptom severity, anxiety and depression were taken at baseline, immediately before the trauma booklet advice session (allocation session) and 3 weeks, 3 months and 9 months after the handing out of the trauma booklet (independent variable) during an advice session or an equivalent waiting time. Compliance with reading of the booklet was assessed by self-report at 3 weeks. The results were correlated with PTSD symptom severity at subsequent follow-ups.

3.3 MEASURES

3.3.1 STRUCTURED CLINICAL INTERVIEWS

3.3.1.1 Structured Clinical Interview for DSM-IV (SCID, First et al., 1995) – The SCID is a structured clinical interview schedule, containing a clinician-administered screener for all psychiatric disorders based on DSM-IV (American Psychiatric Association (APA), 1994) diagnostic guidelines. The full SCID interview for all Axis I disorders was given (see Appendix

IV). For Axis II disorders, the SCID-II screener (see Appendix IV) and, if applicable only, the full borderline personality module was applied.

3.3.1.2 Clinician Administered PTSD Scale (CAPS-DX, Blake et al., 1995) – The CAPS-DX is an in-depth, structured clinical interview, assessing for PTSD criteria based on DSM-IV diagnostic guidelines. It allows for assessment of symptom frequency as well as perceived symptom intensity over a week on all of its 30 items, using a five-point rating scale (0 = never/none; 4 = most or all of the time/extreme). It also contains interviewer ratings of global validity, global severity and global improvement for use over time. Additionally, it contains five items, relating to associated features of PTSD, such as guilt, survivor guilt, reduced awareness of surroundings, de-realization and depersonalization. The CAPS-DX was administered by CAPS-DX trained, independent clinical psychologists. The CAPS-DX was taken before clients were allocated to their respective experimental conditions and at 3 months' and 9 months' follow-ups.

3.3.2 SELF-REPORT MEASURES

3.3.2.1 Posttraumatic Diagnostic Scale (Foa, et al., 1997) - The PDS (see Appendix V) is a brief, 49-item, client-scored screening and diagnostic instrument that helps assess the presence and symptom severity of PTSD. Clients are asked to rate how much they were bothered by each of the PTSD symptoms specified in the DSM-IV on a scale ranging from 0 (not at all) to 3 (5 or more times a week/ almost always) over a period of a week. In addition, the presence or absence of PTSD is determined by assessing whether a client endorsed the minimum number of symptoms

(with at least a score of 1) required by DSM-IV criteria. The PDS yields both a PTSD diagnosis according to DSM-IV criteria and a measure of PTSD severity. In an additional scale, clients were also asked to rate how much distress they had perceived in connection with each of the PTSD symptoms specified in DSM-IV ranging from, 0 = 'not at all' to 3 = 'very distressing'. The sum of these scores yields an overall PTSD distress rating. Clients also indicate whether or not the symptoms interfere with a variety of areas of their lives. The PDS demonstrated high internal consistency (r = .92) and good test-retest reliability (r = .74 for the diagnosis of PTSD and r = .83 for symptom severity). It showed good diagnostic agreement criteria with the Structured Clinical Interview for DSM-IV (First et al., 1995) and good sensitivity and specificity (r = .65; agreement = 82%; sensitivity = .89; specificity = .75). Clients completed the PDS as part of their baseline assessment package, after having monitored their symptoms for 3 weeks and before allocation to either of the two conditions (allocation session) and 3 weeks, 3 months and 6 months later.

3.3.2.2 Beck Depression Inventory (BDI, Beck 1978, Beck et al., 1988) – The BDI (see Appendix VI) is a 21-item self-report measure of depression that has been shown to have good reliability and validity. The BDI's internal consistency ranges from .58 to .93 and test-retest reliability estimates range from .69 to .90. The BDI correlates highly (R = .96) with clinician ratings of depression (Beckham & Leber, 1995) and concurrent validity of the BDI with respect to clinical ratings and the Hamilton Psychiatric Rating Scale for Depression with non-psychiatric populations is .60 and .74, respectively (Beck et al., 1988). This measure was administered at baseline, allocation session, 3 weeks, 3 months and 9 months later.

3.3.2.3 Beck Anxiety Inventory (BAI – Beck et al., 1988) - The BAI (see Appendix VII) is a 21-item self-report measure of common symptoms of anxiety, which are rated on a 4-point scale (0 = never to 3 = almost all the time), which has been shown to have good reliability and validity. This measure was administered at baseline, allocation session, 3 weeks, 3 months and 9 months later.

3.3.2.4 The Trait Dissociation Questionnaire (TDQ – Murray, Ehlers & Mayou, submitted) – The questionnaire contains 38 items, measuring 7 different aspects of dissociation, namely detachment from others and the world, sense of split self, lability of mood and impulsivity, inattention and memory lapses, emotional numbing, confusion and altered sense of time, and amnesia for important life events. The internal consistency of the total score was Cronbach's alpha = .93, and the retest reliability over a 2-months period r = .86. The TDQ (see Appendix VIII) was used to measure the severity of dissociation in clients at baseline assessment.

3.3.2.5 The Trauma Booklet Evaluation Questionnaire (TBEQ) – This questionnaire was based on an earlier, longer version used in the trauma booklet pilot study and contains 10 questions aimed at assessing compliance and clients' subjective ratings of helpfulness of the trauma booklet. Examples of the questions included are: 'Did you read the trauma booklet? (Answers: 'Yes', 'Parts of it' and 'No'); 'What parts did you read?'; 'Is there anything about the parts that you didn't read that could be improved so that you would be more likely to read them?'; 'Is there anything about the parts that you did read that could be improved?'; 'Please indicate, how helpful you have found this booklet?' (Answers: 'Not helpful at all', 'Not helpful', 'Some parts were helpful', 'Quite helpful', 'Very helpful'); 'Would you recommend the use of this booklet for other survivors of

trauma and their families and carers?' (Answers: 'Yes', 'No'). Clients in the trauma booklet condition were asked to return a completed TBEQ (see Appendix XII) together with the other questionnaires, 3 weeks after they had attended their trauma booklet advice session.

3.4 PROCEDURE

3.4.1 INITIAL RECRUITMENT PHASE

Clients who had attended the Accident & Emergency Department of either of the two General Hospitals as a result of their RTA were sent an information leaflet about the study and the PDS. Those who returned a reply slip saying that they were interested and had a score of 14 or more on the PDS were subsequently contacted by an assistant psychologist by telephone within 2 months of their RTA. They were firstly given information about the study and then asked if they had noticed any problems following their RTA, such as difficulties driving, avoidance of any reminders of the RTA or more than usual upset since the accident. It was explained to them that they might like to participate in a special RTA programme that was testing ways of helping people get back to normal more quickly after a RTA. People were told that they would first need to complete a detailed assessment to make sure that their symptoms were the ones that the programme was designed for. It was explained to them that if their problems were the ones the programme could help with, they would then be seen for an appointment by a clinical psychologist

and asked to fill in a daily record of their symptoms for three weeks. Then they were informed that if their symptoms were the ones that the programme was designed for they would be allocated to one of two conditions, they would either receive cognitive-behavioural therapy (CBT) immediately or 9 months later. If they were assigned to the group receiving delayed CBT treatment, they would then either: ***a. meet with a clinical psychologist or research nurse who would give them an information booklet and explain to them how they could use this to get back to normal by working through this at home*** or ***b. they might be asked to observe their symptoms for a few months before receiving CBT sessions.***

For the purpose of this dissertation, conditions a. and b., only, of the delayed CBT treatment group will be relevant and reported on, as these formed an integral part of a much larger scale PTSD treatment research programme (Ehlers et al., in prep.). Potential participants who registered their interest were then sent a covering sheet briefly explaining the study, together with a pack of questionnaires, which contained a questionnaire relating to current life circumstances (see Appendix II) and the questionnaires, which formed part of the baseline measures. They were also given an appointment to attend the SCID interview.

3.4.2 BASELINE ASSESSMENT PHASE

Potential participants were asked to complete the PDS, BDI, BAI and the TDQ and bring these along to their baseline assessment appointment. They were then met by one of the assessors in the trial (refer to Appendix I for names of assessors) and assessed with the full version of the

PTSD section of the SCID and screener versions for AXIS I disorders and AXIS II disorders of the SCID (see Appendix IV). If the screener of any of the AXIS I or II disorders were positive, the potential participant would then be taken through the full module of the SCID for the respective section that they scored positively on. Clients who did not meet the required criteria for the study were excluded at this stage, and if necessary, guided to another appropriate service that could help them. This would include clients not meeting PTSD, those meeting criteria for borderline personality disorder, alcohol or drug dependence, a history of psychosis or any other major psychiatric problem that needed more urgent attention.

Clients who had a positive clinical diagnosis of PTSD and a PDS score of 14 or higher and still indicated that they would like to be part of the RTA programme, were given an information sheet about the programme and 2 consent forms to complete and sign (see Appendix III). They were also given a diary (see Appendix IX) to monitor their symptoms for the next 3 weeks and an explanation of how to do this. They were asked for a date at which they could attend another appointment about 3 weeks later and were given another set of the PDS, BDI and BAI, which they were asked to complete and bring with them to their next appointment in 3 weeks' time. Following their baseline assessment, clients were randomly allocated to either immediate CBT treatment (not relevant for the purpose of this dissertation) or to the trauma booklet or the waiting list conditions by one of the directors of the programme. Group allocations were not known to any of the other clinical research psychologists taking part in the RTA programme and would only be given to the allocated treating clinical psychologist, once a participant had passed their final criteria for inclusion into the RTA programme 3 weeks' later. Final allocation to the experimental

phase of the RTA programme was dependent on the client having a continued PDS score of 14 or higher at the allocation session.

3.4.3 EXPERIMENTAL PHASE

3.4.3.1 THE TRAUMA BOOKLET

The trauma information booklet 'Understanding your Reactions to Trauma', described in section 2.4 of the Introduction of this dissertation, was used as part of the experimental procedure in this research. As the booklet had been written for survivors of all trauma and not specifically for people traumatized by RTA, it was decided to include an additional A4 information sheet, which was folded into the middle of the booklet, highlighting information specific to RTAs and how to use the booklet. The information sheet was entitled: 'Making the most of 'Understanding your Reactions to Trauma' (see Appendix X). It included instructions to participants, that because they would be reading the booklet as part of their RTA programme, during which they would be regularly monitored throughout, they should ignore the comments made throughout the booklet about seeking professional help. It included a section on how to use the booklet, in which it was stressed that people wouldn't have to read the booklet all at once, but could dip into it and read through some of the passages each time. It explained that it was normal and healing to experience some emotions while reading through the booklet. It also included a section on how to tackle problems specific to people involved in an accident, especially explaining avoidance of driving and safety behaviours and what people need to learn in order to re-gain control over their driving.

3.4.3.2 EXPERIMENTAL PROCEDURE

a. **Trauma booklet condition:** Following random allocation to this condition, 28 clients were seen by a researcher for an individualized advice session, taking between 30 to 40 minutes. All researchers, consisting of six clinical psychologists (including the current author) and two research nurses followed a standardized protocol, which they had been trained in (using video feedback) by the author of this dissertation, prior to the commencement of the trial. All researchers were additionally given a sheet (see Appendix XI), summarizing the protocol for the trauma booklet advice session. The protocol for the session consisted of three parts. The ***first part*** involved providing an explanation of the rationale for the advice session to the client. This included explaining to the participant that the aim of the meeting was to introduce a booklet that had been written in conjunction with other survivors of trauma and that preliminary research had shown this to be helpful to clients when they knew how to use it with their particular problems. It was explained to clients that the purpose of the meeting was to explore some of the client's own reactions to the RTA, so that they could make best use of the booklet with their particular problems. Clients were given their copy of the booklet and asked how they felt about being part of the trauma booklet condition of the trial in order to note any potentially adverse reactions, which could then be addressed throughout the meeting. The ***second part*** focused on the exploration of the accident and its effect on the client. The researcher asked the client to describe when, where and what happened during their RTA. They would then make some notes about the client's descriptions of their reactions to the accident. Clients were then asked what to them had been the most difficult thing about the accident and what had been the most distressing for them? The researcher then

aimed to normalize the symptoms, explaining that it is very common to feel affected by trauma in that way. The researcher explored with the client how they had coped with their reactions and whether they had understood what their reactions were about. Researchers were trained to look out especially for feelings of self-blame, shame or fear of losing control or going mad. They would elicit from clients whether they had ever talked to anybody in detail about their RTA and how that had felt and if they had done it again, since and if not, why not (checking for symptoms of avoidance). Researchers then normalized the reactions that the client described as very common and understandable. The ***third part*** focused on explaining the use of the booklet to clients. It was explained to clients that the booklet consisted of two parts, one on understanding reactions to the trauma and the other on learning to cope with the trauma. Clients were encouraged to use the booklet in any way they liked, such as writing in it or using sticky labels. The researcher then aimed to link client's described reactions with parts of the booklet, for example, by sticking labels in the corresponding parts of the trauma booklet, focusing on both the understanding and the learning to cope sections. This was done in a very encouraging and normalizing way. Clients were also made aware that the trauma booklet contained a supplement that was especially written for problems relating to RTAs. The advice session was completed by asking the client if they had any further questions or concerns about anything else that was discussed in the session. Clients were told that they would be monitored throughout and that if their symptoms hadn't improved by the end of the 9 months' period they would be offered up to 12 sessions of CBT with a clinical psychologist. It was also explained that clients would be contacted by post to fill out some questionnaires in three week's time, including one aimed at finding out how helpful

they had found the booklet and how they may have used it to benefit them.

b. Waiting list control condition: 27 clients were allocated to the waiting list condition, for which they met for a 15-20 minute with a researcher who told them that they had been assigned to a condition where they would monitor their reactions for a period of 9 months because often these went away just by themselves. Clients were told that they would be monitored throughout and asked to give feedback at regular intervals, such as after 3 weeks by post and after 3 and 9 months for another assessment visit. It was explained to them that if their reactions were still a problem for them at the 9 months' follow-up they would be offered up to 12 sessions of CBT treatment.

3.5 ETHICAL ISSUES

The present research was part of an ongoing large scale PTSD research study (refer to Appendix I for the names of the principal investigators) that started on 1st May 1998 and which the author of this dissertation had been part of since its beginning. Full Ethical Committee Approval was obtained (Oxfordshire Psychiatric Research Ethics Committee No: 95/54).

Clients in the waiting list control and the trauma booklet conditions, who had not recovered from their symptoms of PTSD at the 9 months' assessment point, were offered up to 12 sessions of specialist CBT treatment from the clinical psychologists taking part in the study. Clients

who were not suitable for inclusion into the study were referred to suitable, alternative sources of help, wherever possible.

4.0 RESULTS

4.1 DATA ANALYSIS

All analyses were performed using the statistical package SPSS (Version 10.0). Homogeneity of variances was checked by carrying out Bartlett-Box *F*-tests. None of these variables showed unequal distributions or variances across the two conditions. The data therefore met the assumptions of normality necessary for the use of parametric statistics. Repeated measures analyses of variance (using the SPSS MANOVA programme) were conducted for the statistical analysis of the efficacy of the trauma booklet in reducing symptoms of PTSD, anxiety and depression in the experimental group compared to the waiting list control. Pearson's Correlations between compliance and continuous measures were calculated with the eta-coefficient (as recommended by Linton and Gallo, 1975). For correlations between compliance and dichotomous measures, the phi coefficient was used. Pearson correlations were used to calculate the relationship between perceived helpfulness and continuous measures. For correlations with dichotomous measures the phi coefficient was used.

4.2 EFFICACY OF BOOKLET IN REDUCING SYMPTOMS OF PTSD, ANXIETY AND DEPRESSION

4.2.1 Hypothesis 1.1 Effects of the trauma booklet on reduction of symptoms of PTSD

Changes in symptoms of PTSD were examined in the following ways. Firstly, PDS frequency and distress ratings at each point in time were compared between the two groups. Table 6, below, illustrates the means and the standard deviations for both PDS frequency and distress at the different assessment points for the trauma booklet and for the waiting list control group. As can be seen from this table, both PDS frequency and distress in both groups show a reduction over time. The PDS frequency and distress scores taken in the two conditions at baseline were

Table 6. Means and Standard Deviations (*parenthesis*) for PDS scores over time for the 2 conditions

		Condition			
Time	**PDS**	***Booklet Condition***		***Waiting list control***	
Baseline	**Frequency**	**29.60**	*(8.26)*	**28.31**	*(6.73)*
	Distress	**30.68**	*(8.76)*	**28.71**	*(7.71)*
Allocation session	**Frequency**	**26.24**	*(7.28)*	**23.70**	*(8.03)*
	Distress	**24.62**	*(7.07)*	**22.76**	*(8.93)*
3 week follow-up	**Frequency**	**19.75[3]**	*(8.87)*	**19.38[1]**	*(7.92)*
	Distress	**19.22[3]**	*(9.27)*	**20.20[1]**	*(8.41)*
3 months follow-up	**Frequency**	**16.44[2]**	*(9.05)*	**17.82[3]**	*(9.26)*
	Distress	**18.05[2]**	*(9.98)*	**17.17[3]**	*(8.85)*
9 months follow-up	**Frequency**	**18.25[1]**	*(9.00)*	**15.47[2]**	*(9.14)*
	Distress	**17.81[1]**	*(9.86)*	**16.06[2]**	*(9.34)*

Note: N = 25 per group, except [1] N = 22; [2] N = 23; [3]N = 24;

compared to those taken at the allocation session to find out whether the self-monitoring of symptoms had had an effect on the reduction of PTSD symptoms. Statistical analysis using repeated measures ANOVA testing the effect of condition (trauma booklet – waiting list control) and condition x time (baseline – allocation session) on PTSD symptoms (PDS frequency or PDS distress) was performed. The results showed that the main effect of condition was insignificant as might be expected before experimental allocation, but that there was a significant main effect of time, $F(1,48) = 17.95, p < .001$. The same analysis was performed for the PDS distress ratings and the results also confirmed a significant main effect of time, $F(1,48) = 38.40$, $p < .001$, but no group effect or interaction.

Next, repeated measures ANOVAs were conducted to examine whether there were any significant differences in PTSD symptomatology between the allocation session and at the 3-week, 3 months and 9 months time intervals. These revealed a very significant overall main effect of time on both PDS frequency ratings (3 weeks: $F(1,44) = 20.71, p < .001$; 3 months: $F(1,45) = 41.53, p < .001$; 9 months: $F(1,43) = 47.69, p < .001$) and PDS distress ratings (3 weeks: $F(1,44) = 7.78, p < .01$; 3 months: $F(1,45) = 17.15, p < .001$; 9 months: $F(1,43) = 30.00, p < .001$). However, there were no significant interactions of condition by time on any of the PDS frequency ratings (3 weeks: $F(1,44) = .18$, n.s; 3 months: $F(1,45) = 3.08$, n.s.; 9 months: $F(1,43) = .05$, n.s.) nor on any of the PDS distress ratings (3 weeks: $F(1,44) = 1.32$, n.s; 3 months: $F(1,45) = .20$, n.s.; 9 months: $F(1,43) = .01$, n.s.).

Table 7. PTSD diagnosis at 3 and 9 months follow-up

		Condition			
Time	**PTSD diagnosis (CAPS-DX)**	***Booklet condition***		***Waiting list control***	
3 months follow-up	**PTSD**	**16**	**64.0%**	**13**	**52.0%**
	No PTSD	**9**	**36.0%**	**12**	**48.0%**
9 months follow-up	**PTSD**	**13[2]**	**54.2%**	**10[1]**	**43.5%**
	No PTSD	**11[2]**	**45.8%**	**13[1]**	**56.5%**

Note: N = 25 per group, except [1] N = 23; [2] N = 24;

Table 7, above, illustrates the PTSD diagnostic status of clients at their 3 and 9 months' follow-ups, respectively, as assessed by an independent, 'blind' assessor. It can be seen that at the 3 months' and the 9 month's follow-up, marginally more clients in the waiting list control condition seemed to show a greater PTSD improvement rate compared to the trauma booklet condition, However, statistical analysis, using Pearson's Chi-Square, revealed that this difference was too marginal to show statistical significance (3 months: $\chi^2 = .739$; df = 1; n.s.; 9 months: $\chi^2 = .537$; df = 1; n.s.). The CAPS-DX diagnoses established by independent assessors at 3 and 9 months were also correlated with the PDS diagnoses established by client self-report at 3 and 9 months using Pearson's Chi-Square and a significant relationship between the two emerged (3 months: $\chi^2 = 14.23$; df = 1; $p < .01$; 9 months: $\chi^2 = 6.97$; df = 1; $p < .05$)), indicating good agreement between the two measurements.

The CAPS-DX severity ratings taken by independent assessors were also examined as indicated in table 8, below, which outlines the means and standard deviations of the CAPS-DX severity scores

Table 8. Means and *Standard Deviations* for CAPS-DX scores across the 2 conditions

Time	Measure	*Condition*			
		Booklet Condition		***Waiting list control***	
		Mean	***SD***	**Mean**	***SD***
Session 1	**CAPS-DX**	**54.50**	*(17.10)*	**53.88**[3]	*(17.20)*
3 months follow-up	**CAPS-DX**	**35.85**	*(20.85)*	**37.75**[3]	*(19.21)*
9 months follow-up	**CAPS-DX**	**35.09**[1]	*(23.56)*	**30.08**[2]	*(20.91)*

Note: N = 25 per group, except [1] N = 22; [2] N = 23; [3]N = 24;

across time. The CAPS-DX confirmed the reduction in PTSD scores over the 9 months' follow-up phase in both conditions. There was a significant main effect of time (3 months: $F(1,47) = 48.20$, $p < .001$; 9 months: $F(1,40) = 71.68$, $p < .001$), but no difference between the trauma booklet and the waiting list condition.

Clients' subjective ratings on the PDS of the extent to which they had rated they had 'come to terms' with the trauma (0-100%), their 'level of upset' (0-100%) and their rated level of overall disability (0-10) in terms of 'work', 'social and leisure activities' and 'family life and home responsibilities' as a result of their symptoms of PTSD were also examined. Table 9, below, illustrates the means and standard deviations of these ratings across the 2 conditions at session 1 and 3 and 9 months' follow-up. Repeated measures ANOVAs were used to explore whether the improvements in ratings between the allocation session and the 3 and 9 months' follow-up were statistically significant. A significant main effect of time was found for the coming to terms' ratings

Table 9. Means and *Standard Deviation* of ratings of distress, coming to terms and disability

		Condition			
Time	**Subjective Ratings on the PDS**	***Booklet Condition*** **Mean**	***SD***	***Waiting list control*** **Mean**	***SD***
Allocation session	**Coming to terms**	**59.09[2]**	*(17.36)*	**56.52[3]**	*(15.55)*
	Level of upset	**46.95[3]**	*(22.04)*	**58.26[3]**	*(19.22)*
	Level of disability	**4.90[a]**	*(2.11)*	**4.21**	*(2.04)*
3 months follow-up	**Coming to terms**	**73.40[2]**	*(20.40)*	**66.08[3]**	*(17.77)*
	Level of upset	**31.73[3]**	*(25.52)*	**48.69[3]**	*(28.33)*
	Level of disability	**3.57[3]**	*(2.53)*	**3.35[3]**	*(1.89)*
9 months follow-up	**Coming to terms**	**72.75[c]**	*(19.96)*	**72.72[2]**	*(22.92)*
	Level of upset	**32.61[1]**	*(20.41)*	**40.90[2]**	*(28.60)*
	Level of disability	**3.34[c]**	*(2.13)*	**2.08[1]**	*(2.08)*

Note: N = 25 per group, except [c]N = 20; [1]N= 21; [2]N = 22; [3] N = 23; [a]N = 24;

(3 months: $F(1,43) = 16.17, p < .001$; 9 months: $F(1,40) = 21.94, p < .001$), the level of upset ratings (3 months: $F(1,44) = 13.83, p < .001$; 9 months: $F(1,41) = 28.67, p < .001$) and the disability ratings (3 months: $F(1,44) = 14.64, p < .001$; 9 months: $F(1,38) = 23.31, p < .001$). No interactions between condition and time were found.

Additionally, the CAPS-DX global severity ratings as established by independent assessors were evaluated for the allocation session and the 3 and 9 months follow-up assessments. The CAPS-DX global improvement ratings by independent assessors at the 3 and 9 months' assessments were also examined. Table 10, below, indicates the means and standard deviations for these measures for the 2 conditions. Repeated measures ANOVAs for the global severity over time indicated that there was a significant main effect of time (3 months: $F(1,43) = 18.06, p < .001$;

9 months: $F(1,39) = 24.17, p < .001$), but no statistically significant difference between the two conditions over time.

Table 10. Means and *Standard Deviation* of CAPS-DX ratings of global severity and improvement

		Condition			
Time	**CAPS-DX**	***Booklet Condition***		***Waiting list control***	
		Mean	***SD***	**Mean**	***SD***
Session 1	**Global severity**	**2.04[3]**	***(0.46)***	**2.05[1]**	***(0.49)***
3 months follow-up	**Global severity**	**1.50[3]**	***(0.78)***	**1.61[1]**	***(0.67)***
	Global improvement	**2.09[3]**	***(1.13)***	**2.39[1]**	***(1.20)***
9 months follow-up	**Global severity**	**1.45[1]**	***(0.70)***	**1.35[o]**	***(0.93)***
	Global improvement	**1.95[2]**	***(1.17)***	**1.68[2]**	***(1.32)***

Note: N = 25 per group, except [o]N = 20; [1]N= 21; [2]N = 22; [3] N= 24;

Independent samples t-tests were also performed to examine as to whether there would be any difference between the ratings of the 2 conditions on global improvement at the 3 and 9 months assessments, but no statistically significant difference emerged.

Variables that may potentially predict outcome were correlated with treatment response (as defined by Foa et al., (1991) as a 50% change in PDS frequency or more) and in terms of overall percentage of symptom improvement on the PDS after 9 months for the 2 conditions. In the trauma booklet condition it was found that dissociation negatively influenced the percentage improvement in PTSD symptoms ($r = -.397; p < .05$), as did a diagnosis of current major depression, as assessed by the SCID DSM-IV diagnostic assessment ($r = --.662; p < .01$).

Treatment response was also negatively significantly affected by the experience of current major depression ($r = -.584$; $p < .001$), but clients with a high score on avoidance as measured by the PDS, responded significantly better in the trauma booklet condition ($r = .416$; $p < .05$). For the waiting list control condition, the only variable that influenced treatment response on the PDS ($r = -.468$; $p < .05$) and the percentage overall symptom improvement after 9 months ($r = -.548$; $p < .001$) was gender, with women showing a poorer response than men.

In summary, although a number of different variables emerged that affected treatment response in the trauma booklet and waiting list conditions, the experimental hypothesis, which stated that there would be a statistically significant difference between the trauma booklet condition and the waiting list condition in relation to a comparative reduction in PTSD symptoms, has to be rejected in favour of the null hypothesis, because no such overall difference was found.

4.2.2 Hypothesis 1.2 Effects of the trauma booklet on requests for CBT treatment at their 9 months' follow-up assessment

Pearson's Chi-Square test was used to establish whether there was a difference between conditions in the request for CBT treatment at 9 months' follow-up. Table 11, below, illustrates the number of clients requesting CBT treatment after 9 months in each of the conditions. The statistical results indicated that there was no significant difference ($\chi^2 = 1.33$; df = 1; n.s.) between

the two conditions and the request for CBT treatment at 9 months' time. Therefore the

Table 11. Request for CBT treatment at 9 months' time

		Request for Treatment at 9 months	
		No	Yes
Condition (N = 25)	Trauma booklet	8 (32%)	17 (68%)
	Waiting list control	12 (48%)	13 (52%)
	Total	20 (40%)	30 (60%)

experimental hypothesis that fewer clients in the trauma booklet condition will ask for treatment at the 9 months follow-up assessment has to be rejected and the null hypothesis accepted.

4.2.3 Hypothesis 1.3 Effects of the trauma booklet on reduction of symptoms of anxiety and depression

The differences in symptoms of anxiety and depression, as measured by the BAI and BDI, respectively, will now be represented across the different times of assessment. Table 12, below, outlines the means and standard deviations of the two measures over time across the 2 conditions. Both conditions show a gradual reduction in scores of depression and anxiety over time. In order to explore the statistical significance of these observations, repeated measures ANOVAs were

conducted to explore the changes in ratings between the allocation session and the 3 weeks', 3 and 9 months' follow-up. A significant main effect of time was found for the reporting of depression (3 weeks: $F(1,38) = 23.31, p < .001$; 3 months: $F(1,44) = 7.46, p < .01$; 9 months: $F(1,40) = 30.22, p < .001$) and the reporting of anxiety (3 weeks: $F(1,44) = 4.87, p < .05$; 3 months: $F(1,44) = 32.01, p < .001$; 9 months: $F(1,40) = 30.37, p < .001$). This indicated that clients in both conditions experienced a significant reduction in their depression and anxiety symptoms over the 9 months' follow-up period. No significant difference in effect was found between the 2 conditions and therefore the experimental hypothesis that those clients reading the trauma booklet will experience a greater reduction in depression and anxiety symptoms must be rejected in favour of the null hypothesis.

Table 12. Means and *Standard Deviations* for depression and anxiety over time for the 2 conditions

		Condition			
Time	**Measures**	***Booklet Condition***		***Waiting list control***	
		Mean	***SD***	**Mean**	***SD***
Allocation session	**BDI**	**18.68**	*(10.36)*	**17.40**	*(8.76)*
	BAI	**18.20**	*(9.76)*	**17.60**	*(7.17)*
3 week follow-up	**BDI**	**15.95[3]**	*(8.22)*	**15.13[1]**	*(8.24)*
	BAI	**15.04[3]**	*(9.41)*	**16.77[1]**	*(9.21)*
3 months follow-up	**BDI**	**14.17[2]**	*(7.80)*	**14.13[2]**	*(8.15)*
	BAI	**12.00[2]**	*(9.10)*	**12.17[3]**	*(8.15)*
9 months follow-up	**BDI**	**14.19[o]**	*(8.00)*	**9.95[o]**	*(6.85)*
	BAI	**12.90[o]**	*(10.22)*	**10.38[o]**	*(6.22)*

Note: N = 25 per group, except [o]N = 21; [1] N = 22; [2] N = 23; [3]N = 24;

4.3 COMPLIANCE WITH READING THE BOOKLET AND OUTCOME

4.3.1 Hypothesis 2.1 Relationship between Compliance with reading the Booklet and Outcome

As can be seen, from table 14, below, the majority of participants read the complete booklet, but a somewhat lower percentage of clients (56%) compared to both the previous study (Herbert et. al., in prep.), where the trauma booklet was used with chronic PTSD clients (compliance = 71.4%)

Table 14: Results of Trauma Booklet Evaluation Questionnaire (TBEQ)

Compliance with reading	Current study study (N = 25)	Previous Oxford study – [N = 42]	Turkish {N =299}
Yes	14 (56%)	[71.4%]	{61.0%}
Parts of it	9 (36%)	[26.2%]	{33.0%}
No	2 (8%)	[2.4%]	{ 6%}
Helpfulness			
Very	4 (16%)	[36.6%]	{ 8.3%}
Quite	11 (44%)	[24.4%]	{57.0%}
Some parts	6 (24%)	[34.1%]	{29.7%}
Not	2 (8%)	[2.4%]	{ 4.2%}
Not at all	- -	[2.4%]	{ 0.8%}
Recommendation to friend			
Yes	19 (76%)	[94.9%]	{98.1%}
No	- -	[5.1%]	{ 1.9%}
Missing data	6 (24%)	-	-

alongside their CBT treatment and the Turkish study, where a translation of the booklet was used with survivors of the Turkish earthquakes (compliance = 61%), read the whole booklet. 2 clients reported not reading the booklet, one because she felt that her symptoms had already improved

and the other because the trauma booklet was given to her just before she was due to go on holiday and she didn't have the chance to read it in time for the 3 weeks assessment point. The majority of participants (60%) found the booklet very or quite helpful and 24% found some parts of the booklet helpful. 2 clients (8%) did not find the trauma booklet helpful and their feedback will be discussed as part of the qualitative assessment, below. 76% of participants indicated that they would recommend the trauma booklet to a friend suffering from trauma and none of the participants answered with a direct no, but two clients indicated that their recommendation would depend on the situation, and 4 clients had not provided an answer to this question. Compared to the previous study (Herbert et al., in prep.) and the Turkish earthquake study there seems a slightly more negative trend in terms of the overall feedback on the booklet.

As can be seen from table 15, below, a significant relationship between compliance and treatment response (defined by Foa et al., 1991) emerged ($r = .459$; $p < .05$). A statistically

Table 15: Correlations between compliance and perceived helpfulness and outcome and influencing variables

PREDICTOR VARIABLE	COMPLIANCE	HELPFULNESS
Treatment Response on PDS	.459**	.070
Percentage improvement on PDS	.435**	.027
Education	- .032	.100
Cognitive Avoidance	.480**	.182
Dissociation	- .351(*)	- .338
Current Major Depression	- .452**	.318
Past Major Depression	- .042	.117
** Probability Coefficient < .05 (*) Probability Coefficient < .10		

significant correlation was also found between compliance with reading of the booklet and percentage symptom reduction on the PDS (r =.435; $p < .05$). It was also observed that the experience of symptoms of avoidance as measured on the PDS predicted better compliance with reading the booklet (r = .480; $p < .05$) while the experience of current major depression (as assessed by the SCID DSM-IV diagnostic assessment) predicted poorer compliance (r = -.452; $p < .05$), but there was no significant interaction between diagnosis of past episodes of depression and compliance [as had been found in the CBT treatment study (Herbert et al., in prep.)]. A trend could be observed, suggesting that the experience of dissociation as measured by the Trait Dissociation Questionnaire affected compliance with reading of the booklet (r = -.351; [$p < .10$]) negatively.

No significant interaction was found between compliance with reading the trauma booklet and clients' level of education. Clients' ratings of perceived helpfulness of the trauma booklet did not correlate with PTSD symptom improvement or any other variables.

In summary, the hypothesis that clients who comply with the reading of the trauma booklet show a better outcome in terms of improvement from their PTSD symptoms than those who do not comply with the reading of the booklet was confirmed by the findings of this study.

4.4 SUMMARY OF QUALITATIVE FINDINGS

The qualitative feedback data from the TBEQ (Trauma Booklet Evaluation Questionnaire) was also examined. Clients were asked for feedback about what they found most helpful about the booklet and their comments are presented in Table 16, below. Not all clients gave answers to this question and some clients gave more than one answer. The item that was shared most by clients was the fact that "my reactions are common/normal after trauma". As can be deduced from table 16, below, there are several other helpful aspects about the trauma booklet that were highlighted

Table 16. What clients found most helpful about the trauma booklet

What clients found most helpful	Shared by
Made me realize that many people have the same symptoms that I am suffering, which made me realize that my reactions to the accident are quite normal	7
Had real people's feelings and actions that I could relate to which made me feel I am not alone	2
My feelings are part of a process I need to go through	2
Anger management	2
Clarity of the statements	2
Clearly defined contents	2
Reactions of increased arousal	2
Very informative and relevant to my problems	2
Information on the sheet, dealing specifically with RTAs	2
Outlines actions in a way that made me feel positive	2
Explanations of why certain reactions take place	
Each time you read it, it sinks in a little bit more and makes a lot of sense	
Very user-friendly and easy to follow	
Set out so that you can read small sections as time allows	
Illustrations of events suffered by others put mine into perspective	
Very upsetting to read, but really that was a good thing	
Guilt and self-blame	
Numbing responses	
Section on re-experiencing the trauma	
Advice about tackling avoidance helped	
Advice on depression	
Helped me differentiate between the past and the present	
Acted as a reminder for me to try and do something about my problems	

by more than one person. Overall the feedback bears similarities to earlier findings in the previous qualitative trauma booklet evaluation study and the pilot study. Only two clients (4.8%) did not find the booklet helpful. One of these indicated that there was not enough practical guidance and that the trauma booklet "*was depressing because it gave me no help about what to do and when I started to relate to things the advice in the booklet was too often to get in contact with a therapist or doctor*". The feedback was that "*too many issues were covered which made the booklet too* broad". The other participants' feedback about the booklet was that it seemed "*daft to rely on a booklet to help some process. At the time of the trauma booklet session it seemed ok, but in everyday life if I have a query or a problem or worry I wouldn't stop and get a book out to put me in the right direction*". Another person fed back that initially after receiving the trauma booklet she did not find it very helpful, but when she went back to it later to read it again it meant much more to her and she indicated that she then found it of help.

Table 17. What clients found least helpful about the trauma booklet

What clients found least helpful	Shared by
Facing doing it – having to work through it on my own – aloneness is difficult for me	2
The fact that it's a booklet – difficult to read when your concentration is low – which is when you need the most advice	2
Not comprehensive enough – I would have liked to have gone deeper with some of the forms of trauma	
Too much, did not seem to apply to me	
Certain aspects I would like to try and get sorted out and I now think that I can only do this by speaking to someone	
Other people's experiences seem to be so traumatic – made me feel guilty that mine was not anything like that	
When one is suffering from PTSD, especially in the early days, everything is an effort. I would rather have read a booklet dealing only with road traffic accidents.	
Found it daunting to read through 60 pages of booklet to find the points most relevant to me	
A lot of reading	
Did not relate to my trauma	

All clients were invited to feedback those aspects that they found least helpful about the trauma booklet. Not all clients commented, but the comments of those, who did are presented in Table 17, above. Opinions vary on the usefulness of the length of the booklet. Some clients would have preferred to read a more detailed booklet about their trauma reactions, while others found a 60-page trauma booklet quite daunting to read. Two participants felt that being alone with having to tackle their symptoms was not helpful to them.

Nearly all clients (94.9%) indicated that they would recommend the booklet to a friend. Several clients felt that everything was covered in the trauma booklet and did not make any

Table 18. Improvements clients would like to be made to the booklet

What clients would like to see improved	Shared by
More detail – not comprehensive enough	3
More about partner's feelings and how to best to cope with someone in a trauma	
Needs to be something for people, aged 13-18years, so that they could also understand the booklet	
Better to have had a number of smaller, relevant leaflets – daunting to read booklet	
A good dialogue starter, but a booklet won't be able to help with the aloneness	
Perhaps using less traumatic experiences as examples	
Would have been good to have been given booklet straight after the accident	

suggestions for improving the booklet. Table 18, above, outlines those suggestions for improvement that were made by participants. Three participants would have liked a more detailed and comprehensive booklet to work through, while one person found the reading involved in the current booklet involved daunting. Two people highlighted that they had difficulties with their concentration after their RTA and therefore that reading of the booklet was problematic for them.

5.0 DISCUSSION

The aim of this dissertation was to examine whether a CBT trauma education booklet could be a useful resource for clients suffering from PTSD, anxiety and depression to help them achieve a reduction in their symptoms. Firstly, the main findings from this study will be summarized in relation to the hypotheses stated in the Introduction section of this dissertation. Secondly, the implications of these findings, including clients' qualitative feedback, will be considered and discussed in relation to the various aspects about PTSD, examined in the Introduction. Thirdly, limitations of the present study will be highlighted. Fourthly, recommendations for the treatment of PTSD will be made and possibilities for future research highlighted.

5.1 SUMMARY OF THE FINDINGS

5.1.1 HYPOTHESIS 1.1 - Effects of the trauma booklet on reduction of symptoms of PTSD

The results from the present study indicated that clients experienced an overall significant reduction in their symptoms of PTSD over the 9 months' experimental time period, but that clients who received the trauma booklet experienced no greater reduction in their PTSD symptoms than clients who were part of a waiting list control condition. There was high consistency across findings on all different measurements of PTSD symptomatology, such as PTSD frequency and

distress as measured by the PDS; PTSD diagnostic status and assessment of PTSD severity established by CAPS-DX through independent assessors; clients' subjective ratings of 'having come to terms', 'level of upset' and 'overall disability'; and independent assessor's ratings of global improvement and global severity as established through the CAPS-DX. Therefore, it has to be concluded from these findings, contrary to expectations, that the hypothesis that reading of the trauma booklet will achieve a greater reduction in symptoms of PTSD following clients' RTA must be rejected in favour of the conclusion that reading of the trauma booklet leads to no greater reduction of PTSD symptoms than clients being part of a waiting list control. However, findings indicated that symptom improvement was influenced by different variables in the trauma booklet condition compared to the waiting list control condition. For example, it was observed that those clients who had a current diagnosis of major depression and dissociation responded less well in terms of a reduction in their PTSD symptoms in the trauma booklet condition, but not in the waiting list condition. In contrast, clients who scored high on avoidance responded better in terms of improvement in PTSD symptoms in the trauma booklet condition, but not in the waiting list control. These findings suggest that although both conditions led to the same overall amount of improvement in PTSD symptomatology that this might have been influenced by different factors.

5.1.2 HYPOTHESIS 1.2 - Effects of the trauma booklet on requests for CBT treatment at 9 months' follow-up

It was found that there was no significant difference in the number of clients requesting CBT treatment for their remaining symptoms of PTSD between the trauma booklet condition and

the waiting list control condition and the trend (not statistically significant) even indicated that a greater number of clients in the trauma booklet condition (68%) requested further psychological help at the end of the 9 months' period compared to clients in the waiting list control condition (52%). Again it has to therefore be concluded that reading of the trauma booklet does not reduce client's requests for psychological help with their PTSD, following an RTA.

5.1.3 HYPOTHESIS 1.3 - Effects of the trauma booklet on reduction of symptoms of anxiety and depression

Further, clients in both conditions experienced a greater overall reduction in their symptoms of anxiety and depression over the 9 months experimental period, but again there was no significant additional effect in reduction of anxiety or depression for those clients receiving the trauma booklet. For this hypothesis also there is no evidence that the reading of the trauma education booklet helps to reduce symptoms of anxiety and depression in clients following their RTA.

5.1.4 HYPOTHESIS 2.1 - Relationship between compliance with reading the booklet and outcome

Compliance with reading the booklet was good, although it appeared somewhat lower compared to both, measures of compliance in the previous CBT study (Herbert et al., in prep.),

and in the Turkish earthquake study with 299 responders. The majority of clients in the current study found the trauma booklet helpful. A slight trend emerged in relation to the perceived helpfulness of the trauma booklet as rated by the clients in both the previous CBT treatment study (Herbert et al., in prep.) and the Turkish earthquake study, who gave higher ratings compared to clients' ratings in the current study. The same trend was maintained also in relation to clients' indicated willingness to recommend the trauma booklet to a friend. In the previous CBT treatment study and the Turkish earthquake study, 94.9% and 98.1% of people, respectively, indicated that they would recommend the trauma booklet to another person, whereas the percentage rate of clients who indicated they would do this in the current study was 76%.

A significant interaction emerged between people's compliance with reading of the trauma booklet and PTSD symptom reduction and positive treatment response. Compliance was observed to be negatively affected by people's experience of episodes of current depression and symptoms of dissociation and positively influenced by people's experience of avoidance symptoms.

5.2 DISCUSSION OF THE FINDINGS

The findings of this study did not support the experimental hypotheses that the administration of a trauma booklet would lead to a greater reduction in PTSD symptoms compared to a waiting list control condition. Firstly, the validity of the waiting list control condition employed in the current study will be examined and then several aspects will be discussed in relation to the findings of this study, such as: factors related to the nature of PTSD

and the ingredients required for its treatment; factors related to the trauma booklet and its content; factors related to limitations in the design and nature of the current study; and the implications of this study for clinical practice.

5.2.1 Validity of the waiting list control condition

The results of the current study showed that at the 9 months follow-up assessment 45.8% of clients in the trauma booklet condition and 56.5% of clients in the waiting list control condition no longer met a clinical diagnosis of PTSD. A significant number of people experienced therefore a reduction in their PTSD symptoms and it needs to be examined whether the size of this percentage reduction in PTSD is consistent with outcome findings from other PTSD studies examining spontaneous remission, or if not, which factors in the current study might account for the differences between the current and other research findings and what are the implications of this for the current study. Rothbaum et al. (1992), for example, found in a study of rape victims that although 94% of clients met PTSD criteria within two weeks of their trauma this reduced to 65%, 47% and 42%, respectively, within a period of one, three and six months. Ehlers (2000) asserted that across different studies, it can be estimated that about 50% of those people with initial PTSD symptoms will recover spontaneously during the first year of their trauma. The results of the current study therefore indicate consistency with the rate of PTSD symptom reduction as part of spontaneous remission also observed in previous PTSD research studies and they therefore validate the waiting list group as an acceptable control condition. They also provide further evidence for the conclusion that the reading of the trauma booklet was not a significant factor

leading to enhanced outcome over and above that already expected as part of spontaneous improvement from PTSD. Considering the latter finding it must now be explored what the reasons might be for the lack of effectiveness of the trauma booklet in enhancing recovery from PTSD.

5.2.2 Factors related to the nature of PTSD and the ingredients required for its treatment

While it seems of utmost clinical importance to develop cost-effective and easily accessible treatments for PTSD, which can be utilized early on in the course of PTSD in order to avoid the suffering and potentially huge impact on people's lives associated with chronic PTSD, it may be that educational self-help materials are not effective in treating PTSD because they do not contain the necessary clinical ingredients required for the effective treatment of PTSD.

Although Lovell & Richards (2000) and Bower et al. (in press) tentatively suggested that CBT self-help treatments might be effective both clinically and in terms of providing an easily accessible low cost treatment option, their research concentrated on depressive and anxiety disorders, but not on PTSD. PTSD is ultimately interlinked with a person's most basic survival functions and therefore possibly more than with other psychological problems, a traumatized person can feel completely controlled by their psychobiological reactions to the trauma, such as, for example, the traumatic hyperarousal mediated by the limbic system (Rothschild, 2000). As already described in detail in the introductory section of this dissertation, people often feel very much out of control over their problems with anger, irritability, restlessness, sleeplessness, lack of concentration and the constant perception that they are still currently in danger. Most of these

reactions are experienced in a very physical way and it is likely that because of the very nature of the experience of PTSD, certain therapeutic interventions are not effective. For example, as highlighted in the introductory section, research so far has shown that certain types of therapy, such as supportive counselling (Bryant et al., 1998) or psychoanalytic psychotherapy (Van Etten & Taylor, 1998) did not seem to have much effectiveness in the treatment of PTSD. Bryant et al. (1998), although initially treating clients suffering from ASD following either RTA or industrial accidents, for example, found that 67% of clients treated with 5 sessions of supportive counselling, which consisted of education about the trauma, general problem-solving skills and unconditional therapeutic support, still met full diagnostic criteria for PTSD six months after their treatment. This was in comparison to a matched group of clients who received 5 sessions of CBT treatment, consisting of education about trauma reactions, progressive muscle relaxation training, imaginal exposure to traumatic memories, cognitive re-structuring of fear-related beliefs and graded in vivo exposure to avoided situations. In the latter group of clients only 17% continued to meet full diagnostic criteria for PTSD six months after treatment.

Ehlers & Clark (2000) postulated that trauma only leads to PTSD if a person continues to process the trauma in a way that leads to current serious threat and that this is mediated by mechanisms of both *maladaptive appraisal of the trauma and its sequelae* and *the particular way in which trauma is encoded into memory*. Clinically, therefore, trauma therapy needs to employ techniques aimed at modifying and correcting the mechanisms, which maintain the PTSD. One of the clinical tasks of a trauma therapist working with people with PTSD in a cognitive behavioural way, is to establish a therapeutic environment of trust and safety in which the current perceptions of continued danger can be directly challenged, tested and eventually replaced with more helpful

thoughts regarding people's present situations. Although, the trauma booklet provided education on all the PTSD symptoms and gave basic advice on how to cope with these, based on CBT principles, in clinical practice this is a process that takes time and requires repeated, systematic exploration of the themes that may be maintaining the PTSD and ways to challenge these, e.g. through in-vivo exposure or behavioural experiments, guided by the therapist often over several treatment sessions.

Although people could have read the trauma booklet several times over, there would have been several differences for them compared to the treatment they would have received from a Clinical Psychologist, skilled in CBT trauma therapy. The first of these is that their treatment might not have been sufficiently individualized according to the specific nature of their experience and subsequent problems, which is one of the factors very much embedded in skilled CBT trauma therapy. Although the initial booklet session attempted some individualization, in therapy this would be a continuous process that would adapt to clients' changing needs over time, which could not have been achieved through the use of the trauma booklet. Indeed, feedback from one of the clients who did not find the trauma booklet helpful was that it 'seemed daft to rely on a booklet to help some process, because in everyday life when I have a query or a problem or worry a booklet couldn't put me in the right direction'. Another client expressed that they felt that the booklet did not relate to their trauma and a third client gave feedback that the booklet did not seem comprehensive enough and that they would have liked to have gone deeper, and yet another client indicated that 'it was too much and did not seem to apply to me'. All clients were potentially indicating that the trauma booklet did not meet their individual needs, which an actual CBT therapist might have been able to do in a more appropriate way.

Secondly, another difference is that clients reading the trauma booklet would not have had the continuous feedback from their therapist that would have helped them to track their progress over time, including the identification of aspects which they might have been stuck with and the subsequent joint exploration and resolution of these. One of the problems with PTSD, especially, is that due to the frightening nature of the symptoms, people often completely avoid talking or thinking about their problems in their daily lives in order not to have to face their uncomfortable feelings. Although the trauma booklet provided some explanation of this and encouraged people to confront situations and thoughts in a systematic way that they might be avoiding, it would not have been able to help people recognize where they might have been stuck in their progress and have motivated them enough to carry on challenging their feelings, despite their potentially very distressing feelings. Of considerable importance here is also the fragmented nature of the trauma memories, and although the booklet encouraged clients to 'get it out and talk about the trauma', people might not have had conscious access to certain parts of their traumatic experience. Therefore, unless they had continued to write and re-write their story several times in a systematic manner, they may not have gained conscious access to certain trauma memories, which would therefore not have been processed and continued to serve as traumatic triggers in people's daily lives. This is an aspect of trauma treatment that might be very difficult to meet through means other than working with an actual CBT trauma therapist skilled in imaginal exposure techniques. Indeed one feedback from a client about what they found least helpful about the trauma booklet was: 'Facing doing it – having to work through it on my own'. Another client gave feedback that they thought that they could only now get certain aspects of their trauma sorted out by actually speaking to somebody about them.

Thirdly, one of the features of PTSD is that the fear response is often generalized to harmless stimuli in people's present day life (Herbert & Wetmore, 1999). Clients receiving the trauma booklet would have done the reading in their daily environment and different to clients receiving CBT based trauma therapy, would have therefore not have had the experience of visiting a 'safe' environment, from which they might have had the necessary distance to re-evaluate the actual safety of stimuli in their daily environment, which might have made it easier for them to therefore challenge their safety behaviour, for example. The possibility that some people may have felt 'unsafe' in their home environment while reading the trauma booklet could be connected to some people's reported difficulties with the reading of the booklet, as education did not seem to have a significant effect on people's compliance. Feelings of 'lack of safety' would have triggered symptoms of hyperarousal, including people's ability to concentrate. One person indicated that they 'found it daunting to read through 60 pages of booklet to find the points most relevant to them', another expressed that it was 'a lot of reading' and yet another client gave the feedback that 'the booklet was difficult to read because my concentration was low' even though they knew that this was when they 'would have needed the most advice'.

Lastly, a Clinical Psychologist trained in CBT trauma therapy would be able to draw on any one or several of a number of different techniques, such as education, self-monitoring of symptoms, exposure treatment, cognitive re-structuring, anxiety or anger management, all of which form part of the CBT approach to the treatment of PTSD, at any given time during the therapeutic process. These techniques work on different levels and depending on the nature of the technique chosen it could lead to changes in the cognitive, emotional or physiological systems of a client. One of the skills of a trained therapist is to recognize which technique might most benefit a

client at any given time, based on the therapist's own clinical experience and knowledge of empirical research. Although, working through some of the recommendations on coping with the trauma in the booklet would have tapped into some of these different CBT techniques, clients would have not had the knowledge when to use which technique and how often and how long to use this. The possibility that the trauma booklet played an educational role, only, rather than also providing its readers with other therapeutically effective CBT techniques for the treatment of their PTSD can therefore not be dismissed. As the study by Bryant et al. (1998) indicated supportive counselling, which seemed to predominantly contain such an educational aspect unfortunately did not prove to be effective in preventing PTSD. This possibility will now be further discussed, below, when examining the factors related to the trauma booklet and its content.

5.2.2 Factors related to the trauma booklet and its content

There are several potential factors related to the trauma booklet and its content that may have contributed to the lack of its therapeutic effectiveness as demonstrated in this study. These will now be highlighted, below.

One of the potential reasons that the trauma booklet did not show a therapeutic effect is that it was not originally written with the intention to replace the process of trauma therapy. When it was first written in 1995, it was the first self-help trauma booklet, based on CBT techniques in the United Kingdom, and possibly in the world. As outlined in the introductory section of this dissertation, the trauma booklet had been written in collaboration with survivors of

trauma, who had recovered from their PTSD as a result of receiving CBT trauma therapy. The booklet had been written as a direct result of the author's clinical observations that many of the trauma clients that she encountered seemed to secretly fear that 'they were going mad' and 'that their reactions were completely abnormal', both aspects which, were found by Ehlers et al. (1998) to be important predictors of PTSD one year after the experience of a trauma. The trauma booklet had been written as an educational guide wanting to enable sufferers from PTSD greater understanding of their reactions to trauma in order to help them re-gain control and lose their feelings of stigmatisation, which it was hoped by the author, would lead survivors of trauma to come forward and ask for therapeutic help sooner rather than suffer in silence for a long time or remain mis- or undiagnosed for years. It seems, according to the qualitative feedback received from clients in the present study and also in the previous CBT treatment study (Herbert et al., in prep.), that the booklet seems to help clients understand their reactions to trauma better and leaves them feeling less alone with these and therefore is fulfilling the aims that it had originally been written for. The results of the current study seem to suggest that, this educational effect, however, is not sufficient to achieve a significant therapeutic effect in terms of helping people heal from their PTSD.

Another problem may have been that, because the trauma booklet was not originally written with the intention of replacing therapy, the recommendation to see a GP or another professional, who will be able to help clients further with their difficulties, appears rather frequently in the booklet. Although clients were informed in the supplementary sheet that they should ignore this recommendation as they were already monitored as part of the research trial, this could nevertheless have affected clients' confidence in terms of using the booklet as their only

source of help for their PTSD. It is also interesting to note in this context that when the trauma booklet was used in conjunction with CBT therapy in the previous study (Herbert et al., in prep.), clients' compliance with reading the booklet seemed to be somewhat higher.

Yet, another factor that seems important to consider is the trauma booklet's relative breadth in terms of the topic areas covered. The booklet was written in fairly simple language covering all of the common reactions to trauma and it gives simple advice of how to cope with these in order to be able to reach as many people as possible and to make the booklet accessible despite clients' potential difficulties with concentration. For some people the booklet may not have provided enough depth in terms of guidance on how to try out some of the coping strategies suggested in the booklet, and therefore some clients may not actually been able to put any of the suggestions into practice. Evidence for this seems to come from some of the qualitative feedback where some clients indicated that the booklet was not comprehensive enough for them. This feedback is contrasted by feedback from some other clients that even such a relatively 'simple' to read booklet was 'a lot of reading' and some people might have preferred 'a number of smaller, relevant leaflets', because it was 'daunting to read the booklet'.

A further factor could have been the trauma booklet's lack of specificity in terms of RTAs. The trauma booklet was written for single-incident traumas in general and although some of the examples in the booklet relate directly to traumatic experiences linked to RTAs and an extra information sheet specific to RTAs was included in this study, most of the booklet content describes traumas other than RTAs. While the same mechanisms apply to PTSD as a result of a RTA or other single-incident trauma, readers of the booklet may not have been able to relate very

easily to examples, which were not directly linked to RTAs. This may have affected their motivation in terms of acting on some of the advice given in the booklet or they may not have recognized the relevance of the booklet to them. Both of these observations seem confirmed by some of the qualitative feedback that was given, for example, 'too much, did not seem to apply to me', 'found it daunting to read through 60 pages of booklet to find the points most relevant to me', 'did not relate to my trauma' or 'when one is suffering from PTSD, especially in the early days, everything is an effort. I would have rather read a booklet dealing only with road traffic accidents'.

5.2.3 Factors related to limitations in the design and nature of the current study

There are also some limitations in the design of the current study that need to be addressed for future research. One factor is that the trauma booklet was tested only with a population of RTA clients suffering from PTSD. From this study alone it is therefore difficult to conclude that the trauma booklet may not indeed be more effective with people suffering from PTSD following other types of trauma, although the above limitations of the booklet itself would still remain relevant also with other client groups.

Another limitation might have been related to the fact that the trauma booklet was introduced to clients as a therapeutic source of help on its own. In the past, the trauma booklet had only ever been given to clients who were either waiting for their immediate CBT treatment for PTSD, as in the original pilot study, or as part of already receiving CBT treatment for PTSD. In the previous CBT treatment study (Herbert et al., in prep.) a positive relationship was found

between clients' perceived helpfulness of the trauma booklet and their response to CBT therapy after 3 weeks. However, it was not possible to ascertain as to whether clients who responded positively to their CBT therapy after 3 weeks were more likely to find the booklet helpful as it further reinforced elements of their therapy, or whether clients who found the trauma booklet helpful were more likely to gain a direct therapeutic effect, which enhanced their rate of progress in therapy. Despite managing clients' expectations in terms of not knowing which of the conditions would be the most effective treatment for PTSD in the current study, it could be that clients who were allocated to the trauma booklet or waiting list condition felt disappointed not to have received CBT therapy for their PTSD immediately and this may have affected their motivation with reading the booklet. Clients received the information about which condition they were allocated to as part of the research trial a few minutes before their introductory booklet session. Although, clients may have initially indicated that they were happy to be part of the trauma booklet condition and, indeed, some of them expressed relief at not having to attend the 12 sessions of CBT treatment, they may have only really realized that they would receive no further direct input or help for the next 9 months, apart from the monitoring sessions, once they went home and started reading the trauma booklet. Clients' disappointment, may have affected their motivation and might have affected compliance with reading the trauma booklet, which seemed indeed somewhat lower in this study compared to any of the previous studies and one of the clients who did not find the trauma booklet helpful indicated, that: 'at the time of the trauma booklet session it seemed ok, but in everyday life if I have a query or a problem or worry, I wouldn't stop and get a book out to put me in the right direction'. Satisfaction ratings with allocation to the booklet condition at a later stage in the trial may have been providing further useful information regarding this possibility.

Another consideration, related to the previous point is that, given the original intention of the trauma booklet to be used as a supplement and not a replacement for CBT therapy, the trauma booklet may have been more effective if clients would have had more access to a specialist CBT therapist throughout their 9 months booklet trial period. For example, clients may have responded to the booklet better in terms of its therapeutic effectiveness, if they had had one or two more trauma booklet follow-up sessions. These might have included problem-solving of those areas in which clients may have felt stuck with or which they hadn't been able to put into practice in the duration of the 9 months. Another possibility would have been to have allowed clients to have direct additional telephone access to a CBT therapist in this study, to discuss particular points in the booklet that they may not have been able to relate to their trauma or to help them with their motivation regarding trying out some of the recommended coping strategies. It may be that the knowledge that clients would not be on their own with the reading of and working through the booklet may have enhanced its direct therapeutic value. Indeed, some clients' qualitative feedback related to the fact that working through the booklet on their own was difficult for them. It would have been helpful to have asked clients for further feedback at their 9 months' follow-up, which factors they might have felt would have made it easier for them to gain more direct therapeutic value from the booklet.

5.2.4 Implications of the findings of this study for clinical practice and for future research

Several implications for clinical practice and future research arise from the findings of this study, which will now be further discussed.

The findings of this study indicate that the trauma booklet does not have a direct therapeutic effect as a CBT treatment for clients suffering from PTSD following a RTA. It can therefore not be clinically recommended as a cost-effective or therapeutically efficient replacement for therapy with this client group. However, overall clients seemed to highlight various aspects about the trauma booklet that they had found helpful, such as recognizing that their symptoms were understandable and normal and that they were not alone with their feelings and actions and, although these did not directly enhance their recovery from PTSD when the trauma booklet was used a therapeutic medium on its own, these may be useful in terms of helping clients recognize that they have a condition that they can receive help for. Future research may therefore be called for to evaluate whether clients receiving the trauma booklet following their admission to A&E departments after a RTA would be more willing to come forward to request help for their trauma symptoms compared to people not receiving the booklet. Therefore the booklet could be useful in preventing chronic PTSD and the severe human and societal costs of this by enabling clients to request help promptly following their trauma.

Considering the overall current shortage of specialist CBT trained trauma therapists within the NHS and private treatment settings, the question of how people suffering from PTSD might best be helped in a fairly immediate and cost-effective way unfortunately remains unanswered by the current research. A resource such as a booklet or other long-distance treatment programmes as an alternative to CBT treatment would still seem to be of considerable clinical utility if it was found to have a good therapeutic effect. It may therefore be helpful to direct future research towards evaluating whether a trauma booklet that is more specifically relating to a particular

trauma only, such as RTA, would be a more clinically effective tool than a booklet describing the effects of trauma generically, as the current booklet does.

The current study also seems to indicate that a trauma booklet, which is based predominantly on educational information, may have little direct therapeutic effectiveness in treating PTSD. Therefore, further research is needed to evaluate which elements of a CBT treatment approach are the most effective for the treatment of PTSD and which of these might lend themselves to incorporation into a self-help booklet or a long-distance learning programme. Further, the current trauma booklet may have better therapeutic effectiveness for the treatment of PTSD, if used in conjunction with additional client access to a CBT trained trauma specialist, such as, for example, through telephone contact when the client felt the need for this. It would be useful to evaluate whether this might be a helpful treatment possibility for clients not being able to readily access specialist trauma services in their local area. The appropriate depth of a trauma self-help booklet would also need to be further investigated. It may be that clients could make use of a more comprehensive and in-depth trauma self-help book, such as 'Overcoming Traumatic Stress' (Herbert & Wetmore, 1999), for example, if they could have access to additional specialist telephone support. This might be especially helpful for clients experiencing concentration problems and for those for whom reading a 60-page booklet presented a problem. It could also be helpful for clients suffering from symptoms of major depression, for whom compliance with reading of the booklet proved more difficult.

6.0 CONCLUSION

To conclude, the current booklet did not show significant therapeutic effectiveness for the treatment of PTSD for clients who had experienced a RTA. Therefore the booklet in its current form cannot be recommended as a cost-effective part of routine clinical practice for RTA clients who have developed PTSD. Further research is needed to investigate the elements that such a trauma booklet or equivalent tool, would need to contain and how and under which conditions it would most appropriately be administered in order to be an effective therapeutic method for the early treatment of PTSD and the subsequent prevention of chronic PTSD. However, the qualitative findings from this research seem to indicate that the trauma booklet in its current form may serve some usefulness in enabling people understanding of their symptoms of PTSD and in providing advice on how and where to seek additional therapeutic help, which, if sought out early, may serve to prevent the occurrence of chronic PTSD and its devastating effects.

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8.0 APPENDICES

Any maps, pages, tables, figures graphs,or photographs, missing from this digital copy, have been excluded at the request of the university.